

# Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC. SEPT. 17, 1945



**Douglas' Experimental "Mixmaster":** First views of the XB-42, powered by engines located in the tail, driving counter-rotating propellers. This experimental bomber, first in the 400-mph. class, is being studied by company engineers for application of its unusual features to commercial versions of the previously announced Skybus feederliner. (See stories on page 12.)

## Lockheed, ALPA Lone Objectors to Stall Rule End

Certification for airline use of war-born transports with excessive landing speed dependent on outcome of CAB hearings.....Page 40

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## Research Policies To Shape In Senate Next Month

Present trends point toward overall agency with no segregation of military and naval programs.....Page 24

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## Non-Schedule Rules Hearing Looms As Opposition Unites

Last-minute rally of protests against CAB examiners' proposal to provide economic regulations seen paving way for oral arguments soon...Page 10

## Washington Observer



**AIRCRAFT SCHEDULES**—There has been a great amount of polling and hearing the past two weeks on Army-Navy peacetime aircraft schedules. Although some changes have been made in order, vitally affecting several companies, the total amount of the peacetime program is reported has slightly changed from original estimates and the best available predictions at this time put the business of the industry around one billion dollars annually.

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**APPROPRIATION REQUESTS**—Requests for appropriations for the peacetime air force are expected to go to Congress shortly and the amount will affect the industry materially. In revising their schedules—with the atomic bomb the most important factor—the services are attempting to choose from among the aircraft manufacturers those facilities which they regard as the best and most dependable suppliers. While not yet definite, Navy has in general settled on its old favorites, Grumman, Chance Vought, Curtiss and Martin. Army is said to be interested in keeping North American, Boeing, Lockheed and Republic as strong economic units. These companies and some others are scheduled to get enough of the annual program to keep plant and labor nucleus going. In addition, Air Branches will expend very considerable resources for experiment and research. Bulk of the appropriations will go into this phase of the program, according to present plans.

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**WALLACE AIDS CAA CLEAN-UP**—Henry Wallace is taking a personal interest in Administrator T. P. Wright's continuing investigation of inefficiency and irregularities in CAA. Meanwhile, more shake-ups are slated in both Washington and regional offices as it is realized that the general recognition order of last Spring, saving division heads to assist administrators is not panacea. For the first time, it now appears that several old guard leaders may be removed, perhaps by the end of the year. The well-entrenched CAA office holders, by various methods have effectively prevented many of Administrator Wright's policies from going into effect.

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**BASE DISCUSSION**—It is understood that the State Department has advised the British that we are ready to discuss future use of a dozen or more air bases, for which we ended them during our 50 years military sight basis, and that the British countered with a desire to discuss the use of Kinross Field, Bermuda. Location of the field is significant in the air transport picture and it is reported that U. S. negoti-

ous would prefer to discuss all fields at the same time. However, it appears that the agreement and terms reached on Kinross Field may determine the pattern for peacetime use of other bases and the announcement on this should be watched. There are some bases, of course, which are of no value commercially. Discussion on the whole deal will begin in the near future.

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**REQUIREMENTS COMMITTEE**—WPB continues plans continuation of the Requirements Committee, which makes overall allocations of materials to the various aircraft agencies, for at least a part of the reconstruction period. Issued to the Aircraft Resources Control Office is being disbanded after Sept. 30, the AAF and the Navy Bureau of Aeronautics are asking representation on the committee so that the joint aircraft program will have a voice in the division of materials.

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**GERMAN TECHNICAL INTELLIGENCE**—The 9th Air Force is reported well advanced with the job of packing and crating vast stores of technical intelligence material on the German Air Force for shipment to Wright Field. Members of the 9th's disarmament division have found middle-class homes a favorite hiding place for Luftwaffe equipment. Residents often claim the equipment was forced on them.



Douglas C-74, showing one of the two-engine canopy enclosures for pilot and co-pilot and the twin canopy housing P&W Warp Major powerplants.

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## News at Deadline

### CAA Probe Dismissal

Edgar A. Goff, Jr., CAA aeronautical inspector at Pittsburgh, Pa., has been dismissed effective Sept. 13, as a result of the recent investigation of CAA inspectors by Administrator E. P. Wright. A CAA spokesman said that Goff was given opportunity to file an answer to malfeasance charges, and that his answer was regarded as unsatisfactory. Goff has the right of appeal under the Veterans' Preference Act of 1944.

### EAL Accident Probe

The Civil Aeronautics Board will hold a hearing in Miami, Fla., September 19, to seek the cause of the crash of an Eastern Air Lines passenger transport in which 22 persons were killed ten days ago.

### Hughes Boat Certification

Application may be made for commercial certification of the giant eight-engine flying boat, nearing completion at the Hughes aircraft plant at Culver City, Calif., under sponsorship of the Defense Plant Corp. The original contract called for three such planes and specified that they should be commercially certified. When a new contract was drawn, for one plane and no commercial certification, Civil Aeronautics Administration dropped the static tests and detail inspection it had been making. Presumably a lot of ground has been left on this score. Whether it can be recovered is problematical.

### New, Faster Corsair

Developer of a new faster and more maneuverable Corsair fighter for the Navy was made in connection with "E" award contract at Goodyear Aircraft in Akron. It is the F2D, successor to the F2G.

S. D. Beck, basic project engineer on the Chance Vought design phase built by Goodyear, said that the plane had traveled 458 mph in a transonic tunnel test a few months ago and that its rate of climb was 1000 feet per minute, described by Beck as 50 percent faster than jet airplanes now in production.

## Industry Observer



Reductions in Army-Navy aircraft schedules in the past three weeks are expected to bring 1946 service production down to an estimated billion dollars farther schedule compliance by the two services since the end of hostilities were higher than had been anticipated, amounting to \$1,300,000,000. Most recent revision of ship production of 475; as late for 3-28; the rest of the year and a cut of 67% to the first half of 1946, completion of P-47N production by Dec. 3, 1945, of 65% for the Lockheed P-48 in the first half of 1946, Northrop P-48 cut 35% in the last 4 months of 1945, and North American P-51 cut 34% the rest of this year.

How to push a hole in the speed of sound back wall and bank through into super-sonic speeds is at the top of the list of projects the industry has assigned to its research aerodynamicists. Extremely rapid acceleration from 250 mph to 400 mph is inoperative, to increase duration of compressibility buffeting and structural stresses at some speeds. Strongly favored it use of supplemental rocket power. Some tests may be made with attaching maximum level flight speed at high altitude and then diving through sonic speed.

With few exceptions, U. S. plane constructors are training to the best their elaborate wartime public relations departments. One aircraft manufacturer whose public relations budget reached a wartime peak of more than a million dollars a year plan to appropriate only \$10,000 for the department, starting immediately. Among the exceptions is Lockheed, which is keeping nearly all of its public relations staff.

Consolidated Value probably will abandon development of its Model 39 in the transport field; it will concentrate on its big 6-engine Model 57 and its recently announced 30-passenger Model 110, whose development is being pushed at top speed. Prototype may be flying by March.

Despite widespread skepticism on the possibility of the success of jet engine as a transport prime mover, Douglas, Lockheed and North American are carrying the project carefully. Douglas has been made that members of modernized aircraft engine jets be installed to reduce from the trailing edge of the wing, with wing speeds of the engines varied to attain a blending of exhaust rear and minimize noise drawbacks. Jet engines believe that with planes flying at high speeds the noise may not be as great to ground observers or passengers to note other experts believe.

Airline officials next month will witness Navy tests in California of the Berna stopgap log dispersing system which was designed operation FIDO during the war.

Lockheed P-80 probably will remain grounded until the AAF has flown 1000 tests on five games play based at Muroc dry lake.

Navy has withdrawn its cancellation of all two-engine Douglas JD utility transports, similar to the Army A-26C.

Now is the time for food has operators and others who plan to do so to start and scheduled transport operations, in the opinion of those who are watching the CAA process closely. Feeling is strong that the Board will give grandfather clauses to those who are operating at some date to be set sometime between now and Jan. 1, making it difficult for others to enter the field afterward. This procedure was followed in the case of the scheduled airlines when the Civil Aeronautics Act became law.

The main test model of Howard Hughes' highspeed fighter, ordered by the AAF and designated as the F-11 photographic ship, has been shipped to Wright Field and the survey of 24 Hughes Aircraft at Culver City is being lengthened from 6,000 to 7,000 ft. to accommodate the flying prototype.

Ryan has received Navy permission to demonstrate its habeco secret Fowell jet fighter to the press Sept. 20.

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**Aviation News**

McGraw-Hill Publishing Co., Inc.

Sept. 17, 1948

## RFC Reverses Sales Policy; Plane Dealers Get Discounts

Prices cut for BT's, PT's and Cessnas as agency ends long criticized ban on "to-the-trade" disposal; 15 to 20 percent cost reduction set for initial purchase of three planes.

In a reversal of a policy strongly criticized by practically all aviation quarters since its inception, Reconstruction Finance Corporation last week decided to sell surplus primary and basic trainers and Cessnas to civilian dealers at discounts. At the same time it was announced prices will be cut effective Sept. 17.

Discounts of 25 percent on the purchase of three or more primary or basic trainers, and of 18 percent on the purchase of three or more Cessnas, will be taken off the new prices. Revised prices were being sent in to RFC headquarters by sales centers last week

and the new scale replacing the former \$75-\$120 range was expected to be released late in the week.

**Dealer Designation**—Discounts will be given only on an initial purchase of three planes all at one time. Such a purchase will establish the buyer as a "dealer," and the discount will be applicable to all future purchases by the individual, whether of one or more planes.

In announcing this complete change of its original ban on "to-the-trade" disposal, RFC stated "this change has been made in order to expedite the disposal of surplus aircraft of these types and to assist private aviation businesses through the reconversion period."

The plan takes into account the fact that the government cannot provide the distribution and sales organization which would be necessary to reach all prospective purchasers, without enormous expense. This expense is not considered to be justifiable in view of the fact that such an organization already exists among the many hundred aircraft dealers, air service operators, and others throughout the country who have the facilities and experience necessary to service and sell the planes," the agency concluded.

**Followed Talks**—The revised policy says RFC was "delighted" following a number of conferences with members of the aviation industry and others.

The original policy was adopted about March of this year after conferences with the National Aviation Trades Association and other representatives of the industry, and it was pointed out in Aviation News at the time that RFC was upholding the ready-made distribution set-up of airport



BOEING CHIEF:

William M. Allen, vice president of Boeing Aircraft, a leader who has been the company's constant expert on possible-shooter since its organization, and now heads the reconversion job.

service operators, dealers and distributors. The Non-Scheduled Flying Advisory Committee concerned the policy as "unduly in concept, uncommercial in operation and objectionable in its fundamental ban of engaging the government in a business directly competitive with established industry."

While under the revised policy, RFC will still sell on the pre-1942 basis to individuals, the hope seems to be that the dealers will absorb enough planes to make buying direct from the government unnecessary.

**Early Arrivals**—For their part, dealers are gratified that at last RFC has recognized their existence, but express no great enthusiasm. Some feel it is making too early arrivals. Others wonder if perhaps RFC feels it has skinned the cream off the market.

Since the past April, RFC has sold about 3,700 PT's, 16 BT's, and 400 Cessnas. It has remaining approximately 3,000 PT's, 8,000 BT's, and more than 3,000 Cessnas.

With some predictions saying that as many as 5,500 new air-



# Non-Schedule Rules Hearing Looms As Opposition Units

Low-motivated rally of protests against CAB examiners' proposal to provide economic regulations, including statement by CAA Administrator Wright, seen paving way for oral arguments soon.

Emphatic protests against CAB examiners' proposals to provide economic regulations for non-scheduled commercial flying intertwined with a large number of demands for a public hearing on the proposals, last week.

State more than 40 requests for oral arguments, including a recommendation by Civil Aeronautics Administrator T. P. Wright, were received, it appeared likely that CAB would schedule such a hearing.

**Deadline Deluge**—Virtually all of the answers and hearing requests were received at the Sept. 11 deadline, many by teletype, and some apparently provided by an editorial in Aviation News, Sept. 10, which pointed out that only one response had come in, shortly before deadline, despite the importance of the matter to the industry.

Administrator Wright's recommendation opposing the examiners' report is expected to weigh heavily. He advocated continuation of the general exemption order No. 222 by which airlines are exempted from non-scheduled flying (on economic regulations) "until a better solution of the problem can be found."

His recommendation included a report from his CAA Non-scheduled Flying Advisory Committee favoring continuation of exemption.

**Data Lacking**—The committee's resolution, proposed by Beverly Howard of Hawthorne Flying Service, Orangeburg, B. C., and seconded by Arthur Borman, Des Moines, committee chairman, expressed the committee's belief "that charter operators should be permitted unrestricted operating privileges until complete data and information shall have been developed, previously experience having entirely negated for the issue of any economic regulation."

Only two of the replies received were in wholehearted support of the examiners' recommendations and, reportedly, none from the Air Transport Association and American Airlines, Inc.

The public counsel for CAB commented that "the proposed economic regulations...are the regulation resulting therefrom are both too restrictive on the one hand and too unlimited on the other."

**Individual Response**—A surprisingly large volume of replies from individual aircraft service operators who expect to do some charter flying and would be affected adversely by the proposed restrictions, was heard. Most of these were simple requests for an oral hearing on the proposed regulations, but there were a considerable group of specific comments ranging all the way from and including "Prohibit all charter operations and operations among them."

T. E. Byrnes, Airways, Inc., Cleveland, Proposed Docket 1483 and CAB release 54 for Part 42 would penalize all fixed base operators and persons normally associated with that service, unnecessarily to approve such regulations would subvert all civil aviation.

C. C. Macgregor, Grand Central Airlines, Inc., Chicago, said that liberalization of 10 trips per month be eliminated and matter assigned for oral argument. Airlines are all organized and have their arguments already prepared while the non-scheduled operators are scattered and disgruntled. This does represent small business in aviation in this country. It would appear to be the duty of CAB to protect them to fullest extent against encroachment by large interests.

Baron Aviation Co., and Black River Flying Service, Port Huron, Mich., chairman of proposed regulations will seriously impair development and progress of aviation in small communities. Existing regulations must be revised to permit fixed base operation of operations on scheduled bases. Otherwise smaller communities will be without air carrier and air mail service for years to come.

South Georgia Flying Service, Americus, Ga., we feel proposed regulations as scheduled as of Sept. 20, are the Aircraft Division in the Equipment Bureau, the Manage-

ment Consultant Division and the Conservation and Salvage Division, all under the office of WPB's operations vice-chairman.

**New Writer Wins TWA Contest Honor**

Marlin Mickel, Aviation News' transport editor, was one of 17 winners in the eighth annual TWA aviation writing and photography competition, results of which were just announced.

Transportation and Western Air will present prizes and awards at a dinner in New York next month, to the following:

**Newsletters**, open class: James J. Strick, aviation editor of The Associated Press, St. Paul; Robert Moutzner, New York Sun, and Ralph Watts, the Detroit News.

**Magazines**: Wayne Parrish, for his weekly column in Liberty Journal, New Orleans, Ar. News, and Marlin Mickel, Aviation News.

**Photography**: A. Aubrey Bodine, Baltimore Sun, for his picture showing parachute troops in action over Albania; William W.

Dymrak, Buffalo Express Courier and Fred H. Powers, Democrat Chronicle, Rochester, N. Y.

**Steno-graphers**: 1946-47: Elizabeth A. Brown, Hartford (Conn.) Times; Nick Moser, Reading (Pa.) Eagle and Herbert A. Shaw, Jr., Dayton (O.) Daily News.

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## DC-8 Specifications

Category	DC-8-63	DC-8-61
Length	200 ft. 0 in.	197 ft. 0 in.
Wing Area	1,000 sq. ft.	975 sq. ft.
Wing Span	110 ft. 0 in.	108 ft. 0 in.
Wing Sweep	35°	35°

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(Note: All winging information is indicated by the numbers immediately following the category name in this table and also in the other tables.)

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**Newsletters**, open class: James J. Strick, aviation editor of The Associated Press, St. Paul; Robert Moutzner, New York Sun, and Ralph Watts, the Detroit News.

**Magazines**: Wayne Parrish, for his weekly column in Liberty Journal, New Orleans, Ar. News, and Marlin Mickel, Aviation News.

**Photography**: A. Aubrey Bodine, Baltimore Sun, for his picture showing parachute troops in action over Albania; William W.

**DC-8 Specifications**

Category	DC-8-63	DC-8-61
Length	200 ft. 0 in.	197 ft. 0 in.
Wing Area	1,000 sq. ft.	975 sq. ft.
Wing Span	110 ft. 0 in.	108 ft. 0 in.
Wing Sweep	35°	35°

Category	DC-8-63	DC-8-61
Wing Area	1,000 sq. ft.	975 sq. ft.
Wing Span	110 ft. 0 in.	108 ft. 0 in.
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(Note: All winging information is indicated by the numbers immediately following the category name in this table and also in the other tables.)

Judges were L. Welsh Pogue, chairman of the Civil Aeronautics Board, Roy A. Roberts, managing editor, the Kansas City Star, Fred H. Powers, Editor of Commerce and Administration, Ohio State University, and Brig. Gen. T. B. Wilson, chairman of the board of TWA.

## Foreign Trade Plan Studied As Aircraft Exporting Shapes

Aviation executives see development of airports abroad, full use of air attaches and purge of German ideas and equipment from South America as essential items; Export-Import Bank forms financing plans.

A foreign trade promotion campaign is being studied by aircraft manufacturing executives to meet the export problems which have developed with the end of the war.

At least three problems, outside of financing, are seen by industry executives in Stevens, N. J., who heads the campaign. Among these are real utilization of civil air attaches where operations can be of great advantage to the industry if they are permitted a wide scope, the development of foreign airports and, finally, closing German aircraft and aircraft ideas out of South America.

**Loan Aids**—On the problem of financing, it is understood that the Export-Import Bank would like to help finance aircraft exports where the terms of the loan are not of interest to commercial banks. Their purpose is primarily to finance foreign trade and their regulations are flexible enough to permit them to cover widely varying conditions.

They will not, however, compete with the commercial banks when former, otherwise, may be able to provide an estimate of the foreign trade financial needs of the industry by the next two or three years on a world-wide basis.

It is understood that the purpose of the Export-Import Bank is to remove finance from the competitive situation. All American firms, the industry has been advised, will be treated on an equal basis. Procedure is limited only by the bank policy of 50 percent of which is that the bank must operate at a profit. At the same time, the bank expects to be able to meet all foreign competition.

**Terms Studied**—Aircraft industry export executives are studying terms which include a description of the product, name of the country and purchaser, the reason why the loan is required,

the amount and terms required and, of course, appropriate references. Financial statements covering the exporter and purchaser usually will be called for.

Of interest to the industry is the fact that the Export-Import Bank may make credit available to foreign governments in which case sales may be made for cash without any liability to the exporter.

One example cited at a recent meeting of the Export Committee of the American Aircraft Manufacturers Association was that Denmark recently borrowed \$25,000,000 which is available for the purchase of aircraft, among other things. Other countries are negotiating similar loans. A loan of \$10,000,000 was made to TACA specifically for the purchase of aircraft. This loan called for repayment in 36 months, installments including interest at four percent. The rate involved in the general financing of exports may be accepted up to 80 percent by the Export-Import Bank.

**Needs Listed**—Aircraft manufacturers, through the Aircraft Industries Association, may be able to provide an estimate of the foreign trade financial needs of the industry by the next two or three years on a world-wide basis.

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## Douglas Unveils Its New DC-8

New plane, successor to DC-3, propelled by twin conventional wing props.

After many months of speculation in industry circles and numerous changes in design, Douglas Aircraft last week brought forth its DC-8, the plane that originally was to be designated the Skybus but which has grown as its stature since its conception that this tale is no longer appropriate and will be dropped.

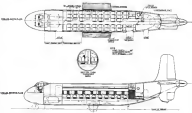
The DC-8-4 is a low-wing monoplane, featuring twin counter-rotating propellers on the aft end. It is reported to be 50 percent faster and to carry twice as many passengers as the fastest, the DC-3, with direct operating costs estimated at \$50 mile per passenger mile.

The new plane is of radical design, with motorless wings and a tail assembly placed at a level above the fuselage. Other features include a movable partition which permits conversion at short notice from all passenger to part cargo, thus allowing a 100 percent load factor at any time.

The plane is powered by two Allison V-type liquid-cooled engines, mounted in the fuselage below the forward cargo compartment floor. They are connected with the two counter-rotating propellers by drive shafts and a gearbox. The low position of the engines permits maintenance from the ground without scaffolding.



Successor to the DC-3: Above, flight view of the DC-8 discloses its unusual lines. Sketches below indicate proposed seating arrangement and position of engine.



## Fastest U. S. Bomber Unveiled

An experimental record-speed bomber built by Douglas, with exceptionally clean lines and unconventional in that the two Allison T38 engines are located side by side in the fuselage, driving counter-rotating pusher propellers in the tail, is now being studied by engineers for commercial application of its new features.

This airplane, the X-45, sometimes known as the "incomparable" because of the unusual propeller arrangement, was expected in authoritative Army Air Forces circles to have a maximum speed of 630-mph at 31,200-ft. Its first bomber is the 400-mile-per-hour-class. It was reported to have a gross weight of 31,700 pounds, small for a bomber, with

a leaner-than-wing. Location of the engines in the rear was designed to increase the wing's efficiency, with no torque or engine nacelles to interfere streamlines.

Commercial X-45—Prospects of making this arrangement in commercial aircraft was indicated in Aviation News, June 10, 1944, when a Douglas drawing of a proposed post-war biplane (see opposite) the X-45, was pictured on the cover. This design had conventional power-plant arrangement, although mention was made at that time of an improved Skybus, which would utilize the same wings, fuselage and landing gear as the version pictured, but added that "the powerplants will be placed in new positions."

Engineering specifications on

the Skybus carried at that time described the proposed airplane as designed to carry 24 passengers, with a flight range of 900 miles and a cruising speed of 180-mph. It was to be powered by two 500-hp engines.

While the Skybus was designed for 24 passengers, the cargo compartment was described as expandable through use of movable bulkheads, permitting flexible use by the loader operator and the short haul operators of others. It was to operate with a takeoff gross weight of 17,300 pounds.

While no military requirements were stated for the X-45, the plane incorporated many features, including the unconventional powerplant arrangement, which are receiving close study for possible incorporation in commercial versions.

## PRIVATE FLYING

### Urban Airpark Pattern Seen St. Louis NATA Test Result

Sixty-day demonstration of landing facility in congested metropolitan area slated to begin Oct. 1; large-scale public unveiling of new planes and ground equipment expected.

By ALEXANDER MCURELY

A 60-day demonstration of airport operation in a congested metropolitan area, beginning Oct. 1, in Forest Park, St. Louis, is likely to provide a sampler of the answers to questions which officials of the country's largest municipalities have been asking ever since the downtown airport site was first suggested.

The project is sponsored by St. Louis members of the National Aviation Trades Association who have formed a non-profit corporation to carry out the demonstration.

**Flight Displays**—An open invitation is being extended to manufacturers of all "personal-owner" type airplanes to display and fly their planes at the airport for the entire period or any part of the time.

Manufacturers of hangars, windmills, radars, airport maintenance equipment, and other facilities and service commodities needed by private flyers, likewise may display their products without rental charge, and as much ground space as is needed will be assigned to each installation.

The manufacturer or distributor will be expected to set up his own exhibit and at the close of the demonstration, Nov. 30, remove it and pay whatever costs are involved in these two operations. The sponsoring committee will meet the cost of preparing the airport for flight and afterward restoring city athletic equipment which is being removed to clear the strip.

**Central Location**—The site is described as "within a mile of the oldest established residential area in St. Louis, near several fine apartment hotels, within easy walking distance of two urban business districts and, by taxicab, within 16 minutes of the city hall and the principal bank-hotel-shops-industry center."

A street-car which runs by the park was clocked at approximately 44 minutes for its trip to the downtown business area by a group who couldn't get a taxi after a visit to the park last December, to witness a one-day flight demonstration which was part of the NATA convention at that time. The strip, at that operation, was

only 1,600-ft. long, but removal of the athletic equipment will now make additional space available.

The sponsoring group, headed by May A. B. Landwehr, well known St. Louis aeronautical enthusiast, as chairman of the civic supervisory committee, and by Murray M. Whitehead as chairman of operations, emphasize that they are planning "no big celebrations, no events, no circus flying."

**'Civic' Reports** — "The airport will be a strictly routine operation, built up to the busiest schedule possible. Records will be kept for a guidebook an airport operation which will be furnished without cost to other communities, aviation organizations or civic groups."

Sub-committees have been assigned to work on projects including:

1) Shuttle service, for airline passengers between the airport and Lambert Field, the big St. Louis municipal airport, 14 miles from the city, without charge, or similar shuttle service to outlying airports, to serve centers of places which are too large to come into the airport.

2) Daily commuter service between outlying communities and St. Louis.

3) Charter flights, for St. Louis businessmen, into the city's trade area and, conversely, flights into the airport, by business or professional visitors from the surrounding territory. (Cities within one-day's flight range of St. Louis will be asked to designate their most convenient fields for auxiliary landing areas, during the airport demonstration.)

Mayor Aloys B. Kaufman has invited other cities to send observers to St. Louis during the



To Reopen St. Louis Strip: Plans to operate a temporary airport at Forest Park, St. Louis, Mo., from Oct. 1 to Nov. 30, on an area which was part of the first St. Louis municipal airport in 1919 have been announced by the St. Louis NATA airport committee.

The operation will be a demonstration of personal plane operation in a congested metropolitan area with control flight rules. Part of the area is shown above, photographed during the NATA flight demonstration at Forest Park last December.



**Aerial Photo of St. Louis Airpark:** The temporary St. Louis Airpark, on Forest Park, viewed from the air, shows relative position of the new runway field to surrounding residential and business areas. The field is a level land out by Gene Probst of the Missouri State Department of Resources and Control. Just below the field is an express highway to the downtown area.

demonstration to use the business area airport in operation. It is hoped that the St. Louis experiment may lead to undertaking of similar airports in municipalities such as Chicago, Cleveland, Milwaukee, Dallas, Philadelphia.

Institutions have also been extended in CAA to make studies on new airport equipment in conjunction with the demonstration. While some war-created devices will not yet be ready for civilian demonstrations, it is anticipated that many beneficial "military secret" articles will be ready for demonstration at the airport.

**Sponsor Shift:**—It is understood that the St. Louis project originally to have been sponsored by the national organization of NATA. Recently, at a meeting of the national board of directors at Kansas City, it was voted to change the sponsorship, so the local St. Louis NATA airport group, which had been active in arranging the field study, took over complete operation of the demonstration.

Scheduled for a period during which many of the personal plane manufacturers expect to get out their first post-war production planes, the St. Louis demonstration, centrally located as it is, may prove to be the largest show of personal planes at one location, since this, at the St. Louis NATA convention was last year.

#### Army Flying Suit Sales

Civilian flyers who want new Army flying suits, which have been declared surplus, can now get them for \$17—established as a retail selling price.

The ending applies to 70 percent

wool, green garrison suits with pockets as chest, hips, above and below knees, and on the left arm below the elbow, with collar lapel upper from neck down, and a zipper on each leg from knee to ankle. The OPA sold suits will be handled by regional offices of the Department of Commerce.

### Canadians Protest Flying Age Limits

New pilot medical regulations, reported under consideration by Canada's Department of Transport, are already being attacked by flyers in the 40-50 age group who claim new restrictions would ground most of the pioneer "bush" flyers who opened many of the Dominion's airways.

Although no new regulations have actually been issued, many pilots are reported already planning protest meetings. According to Stewart Graham, assistant director of civil aviation for the Transport Department, new restrictions might shape as "a matter of age accommodation and visual acuity . . . things that happen in the average man's eye as he gets older."

**P. S. Reaction:**—In America, the initial response among civil aviation circles was one of opposition to any rules that might disqualify that particular age group, long looked upon by officials as one of the most fertile fields for potential personal plane sales and activities.

Source of the Canadian rule considerations is said to be recommendations of RCAF medical ex-

aminers who hold the view that flying is essentially for younger men and women.

Well known, however, as the fact that most of Canada's best known pilots, outside of those on transcontinental and feeder services, are men who have pioneered flying in the northland, served in the air forces of the last war, and who volunteered for ferry command duty in the opening days of the Second World War.

### Seven Small Fields Asked In Cleveland

Private flying facilities would provide full air access to city for business and others.

Seven small, county-owned airports for personal planes, plus a lakefront downtown airport for medium-sized landplanes and seaplanes are included in the plan recently recommended for expansion at Cleveland, Ohio, airport facilities.

The plan, presented by the committee on airports, of the Cleveland Chamber of Commerce, headed by A. T. Colwell, vice-president of Thompson Aircraft Products Co., also calls for an outside airport of 1,500 to 2,000 acres supplementing the present Cleveland municipal airport on the west side of the city.

**Lakefront Plan:**—The report asserts it is possible to construct a medium-size airport on the lakefront along a 16 block span, with 3,300-ft. runways. It is already planned by city to fill in the lake at this point in order to provide land for another roadway and other purposes. Since the bulkheading or sheet piling and the fill for the new area will be used whether or not the lakefront field is built, these areas "are hardly chargeable against the airport." It is estimated that otherwise, cost of building the airport, including one or two hangars, need not exceed \$1,330,000 over a period of years.

"Such an airport is imperative, we believe, in order to give ready access to the business district of the city. After the war many corporations will undoubtedly require chase airplanes for the use of their officials in business."

The seven additional airports for private flyers, schools, etc., need not all be constructed immediately after the war, but it is recom-

mended that at least two, one on the east side and one on the west side, be constructed as soon as possible. Eventually, it is recommended that at least four of these fields be a v.e. hard-surfaced runways, hangars, school buildings, etc., while the other three may be less elaborate installations with all-weather fields. The committee has recommended that the Cuyahoga County commissioners buy the land for appropriate sites, possibly obtaining some of it through tax delinquency, and that the fields be leased, when prepared, to private operators, with the ground reserved a percentage of the gross income as rental.

Other recommendations of the committee would call for:

- ▶ Obtaining federal aid for airport construction where possible.
- ▶ Issue of mortgage revenue bonds "in so far as possible" to pay for the city and county share of the airport construction.
- ▶ Charging "all users of the airports" for the use of the services rendered plus a reasonable profit.
- ▶ Control of all flight operations within the county by one central authority, whether municipal or county.
- ▶ Establishment of a central airline terminal in downtown Cleveland.
- ▶ Air taxi service, by a private company, to Cleveland municipal airport as soon as proper equipment becomes available.
- ▶ Strict service to Cleveland airport, if costs are justified.

### Wisconsin Flying Interest 'Complete'

Wisconsin aviation interest, typified by a growing community-owned private flying base at Oconto Falls, has now reached into almost every town and city in the state, according to air officials there.

A state-wide survey showed that without reported exception, every city council has considered construction of a community airfield. Although many will continue for years without landing facilities, it is asserted that all are at least striving to make some such facilities available "nearby."

**Quick Growth:**—Less than three months old, the field at Oconto Falls has been built partially through funds provided by the property owners and partly through interest labor done by interested citizens. Three runways from 1,300-ft. to 2,000-ft. long, and

360-ft. wide, a barn-type hangar, fueling facilities, and a combined office and club house for the city's Aere Club, have already been provided on the field.

An Aerobics tandem trainer and a Parachute PT-19 are based at the field for flight instruction under the guidance of an AAF veteran. Among the unusual sources of aviation education, announced at the field, is the state's only flying school superintendent, putting the field's plans to use in making long trips to interview prospective teachers.

### Private Flight Cost High, Advises AAF

Potential personal plane buyers in the AAF are told in the latest issue of Air Force, their official monthly journal, that their addition to the initial cost of their planes it will cost them approximately 25 cents a mile to fly, or about \$2,250 to fly approximately 9,000 miles in a year.

Staff Sgt. Douglas Inglis, author of the article "Sky Fares," advises the Air Force of fees and GIs' that for every hour they fly their own coast on spending about \$3 per gal. oil, overhead, and miscellaneous costs and, in addition, they will pay an annual \$200 for storage, depreciation, and insurance.

**Utility Limits:**—"Don't expect too much of it," the appeal continues. "Utility is limited, chiefly

because of weather. When there are storms, you won't fly any more than you'd take a canoe out in a rough sea. Fog will ground all planes and equipment with expensive blind flying instruments which will cost as much as the plane itself. If you want to fly cross-country, plan on spending at least a couple of nights a week studying up on new rules and regulations and navigation. So what you're really getting, for the time being at least, is a flying machine whose use is comparable to that of a motor boat, good for a short spin or a short cruise if the weather is good."

After surveying the field the writer summarizes:

- ▶ The typical private plane will have a wingpan of about 35-ft. so it can land between parallel telephone poles along almost any highway.
- ▶ "It will weigh about 1,300-lb., will have a 65-75-hp. engine simply built so that you can make some minor repairs yourself the same as you do on an automobile. Accommodations will include room for pilot and one passenger with a baggage compartment carrying about 50-lb. of baggage. Its fuel capacity will average about 18 to 22 gallons—enough to take it 300 to 400 miles non-stop. Top speed will be about 115-mph., cruising about 100-mph. but there is no average on standard equipment. It won't have two-way radio, wing slots and flaps or even windshield wipers unless you pay extra."
- ▶ Time-saving through production



**FIRST POST-WAR PRODUCTION AERONAUTS:**

Workers at Avco Aircraft Corp.'s Middletown, Ohio plant are shown completing the first production plane to roll from the plant's assembly line since the war ended, the tandem two-seat Avco Champion, priced at \$2,995. The Champion, with 65-hp. engine, will cruise at 80-mph., land at 26-mph., has 270 miles range, and 160-mph. per minute rate of climb.





Stinson's newest Voyager, the 150 model

methods learned in war-time manufacturing of military equipment, is expected to make it possible to turn out better and cheaper planes, but first prices, the article concludes, will be about the same as the pre-war models since many saved production costs have been used in high labor costs.

## Stinson Reveals New Voyager 150

Deliveries will begin within 60 days on a new, faster and more powerful Stinson four-place personal airplane, according to James C. Welch, private sales director for the Stinson division of Consolidated Vultee Aircraft Corp. The plane, known as the Voyager 150, succeeds the Voyager 120 and will sell for \$55,000, said Welch.

It added that more than \$7,000,000 in customer orders for the Voyager 150 are backed against a scheduled production of 3,500 planes in 1949 and 1946.

**P-38 Hq. Engine**—The new Voyager 150, powered with a Franklin 150 horsepower engine, will cruise at 120 miles per hour over a 500-mile range. Its maximum speed will be 133 miles per hour and its rate of climb 770 feet per minute.

Service ceiling of the new high-wing craft will be 14,000 feet, it takes off at sea level 550 feet and its landing roll 230 feet. The plane weighs 1,200 pounds empty and its useful load is 944 pounds.

The Voyager 150 will be equipped with a new all-metal tail design which increases maneuverability and adds beauty. Wing darts make the plane spin-resistant and improved brakes make greater landing safety.

To incorporate the latest engineering design into their first post-

war personal plane, company officials decided to manufacture the Voyager 150 rather than the Voyager 120, which was powered with a 125 horsepower engine.

Among the major Voyager 150 assemblies in production by the Stinson division, at Nashville, Tenn., are the fuselage, the landing gear and motor mounts.

## Kansas City Outlet Purchased By Parks

Sale of Missouri Aviation Corp. hangars on the Kansas City, Mo., municipal airport to Parks Aircraft Sales & Service, Inc., has been announced. The Missouri organization had occupied this location since its organization in 1929, but general offices of the company have been in downtown Kansas City since 1948.

Hereafter MAC will specialize in aeronautical supply, exclusively, and will discontinue its aircraft and engine repair work, formerly carried on at the airport.

**Firm Need**—The Parks organization has been negotiating for a

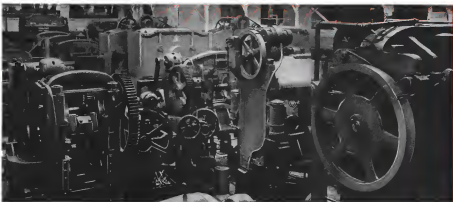
## Stinson Voyager 150

Engine	300 hp Franklin
Wing span	70 ft.
Length	100 ft.
Wing area	1,000 sq. ft.
Weight empty	1,000 lbs.
Weight loaded	1,500 lbs.
Maximum speed	170 mph
Cruise speed	150 mph
Rate of climb	1,000 ft. per min.
Service ceiling	14,000 ft.
Maximum altitude	14,000 ft.
Maximum range	500 miles
Maximum load	944 lbs.
Maximum weight	1,200 lbs.
Maximum fuel	100 gal.
Maximum oil	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
Maximum passengers	4
Maximum crew	2
Maximum fuel tank	100 gal.
Maximum oil tank	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
Maximum passengers	4
Maximum crew	2
Maximum fuel tank	100 gal.
Maximum oil tank	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
Maximum passengers	4
Maximum crew	2
Maximum fuel tank	100 gal.
Maximum oil tank	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
Maximum passengers	4
Maximum crew	2
Maximum fuel tank	100 gal.
Maximum oil tank	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
Maximum passengers	4
Maximum crew	2
Maximum fuel tank	100 gal.
Maximum oil tank	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
Maximum passengers	4
Maximum crew	2
Maximum fuel tank	100 gal.
Maximum oil tank	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
Maximum passengers	4
Maximum crew	2
Maximum fuel tank	100 gal.
Maximum oil tank	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
Maximum passengers	4
Maximum crew	2
Maximum fuel tank	100 gal.
Maximum oil tank	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
Maximum passengers	4
Maximum crew	2
Maximum fuel tank	100 gal.
Maximum oil tank	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
Maximum passengers	4
Maximum crew	2
Maximum fuel tank	100 gal.
Maximum oil tank	10 gal.
Maximum baggage	100 lbs.
Maximum cargo	100 lbs.
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Maximum fuel tank	100 gal.
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Maximum baggage	100 lbs.
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Maximum oil tank	10 gal.
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Maximum cargo	100 lbs.
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FOR  
RECONVERSION

# RUST PROOFING



**W**HETHER reconversion of your plant to peacetime production is sudden or gradual, one of your first chores will have to be the rustproofing and processing of Government-owned machinery, tools and other production equipment scheduled to go into storage. This must be done, with minimum delay, in accordance with Ordnance

Instruction P.S. 500-4.

A stock of suitable Texaco rustproofing products on hand will greatly facilitate your compliance with this requirement, and speed your change-over to civilian production.

Texaco rustproofing products meet Ordnance specifications, and are easily applied by brush, dip or spray. The

protective coating they provide will assure preservation for years.

Whatever your rustproofing requirements, a Texaco representative can render helpful service. Get in touch with the nearest of more than 2500 Texaco distributing places in the 48 States, or write to The Texas Company, 135 East 42nd Street, New York 17, N.Y.

## REMEMBER...

1. Upon termination of war contracts, Government-owned production equipment must be rustproofed promptly, in accordance with official instructions.

2. Ordnance Specification P.S. 500-4 contains official instructions for the complete processing of such equipment.

3. These instructions require that only rustproofing materials meeting Government specifications be used.

4. Texaco rustproofing products meet Ordnance specifications for application on Government-owned equipment.

TUNE IN THE  
TEXACO STAR THEATRE  
WITH JAMES MELTON  
EVERY SUNDAY NIGHT  
—CBS



## TEXACO

## Rustproofing Products

## PERSONNEL

### Col. Henry Returns As Aide To PCA Head

Lt. Col. James D. Henry (photo) has returned to his duties as assistant to the president of Pennsylvania-Central Airlines. Early this year, Col. Henry assumed the distinction of being decorated twice in one day, receiving the Legion of Merit and cluster to the Bronze Star Medal. The former has received for "meritorious conduct in the performance of outstanding service as Deputy Commander and Chief of Staff, First Air Depot Area, 9th Air Force Service Command." Colonel Henry, who had been assistant to Lt. Gen. Lewis H. Brereton, commanding general of the First Allied Airborne Army, is now returned to active duties.

**C & S Staff Promotions Awarded Eight Officials**

In a late-week change of officials, Chicago and Southern Air Lines has announced eight promotions in various flight and traffic offices. They are:

**Raymond G. Blair**, who joined the C & S traffic department after serving as director of the materials branch for the Dodge Manufacturing Corp. of Milwaukee, Ind., has been promoted to assistant manager at the line's Chicago office.

**Philip W. Parker, Jr.**, former traffic representative for the line, has

now been named city traffic manager at Shreveport, La., succeeding Forrest Campbell, who left for a post with National Airlines.

**Robert B. Campbell**, another former traffic representative, is now supervisor of schedules and statistics of the general offices in Memphis, Tenn.

**Gerald W. Davidson**, first employed as station agent at St. Louis and later as chief traffic dispatcher, has been appointed supervisor of reservations procedure at the Memphis general offices.

**Joseph A. Diamond**, succeeding Davidson, becomes chief traffic dispatcher after serving with the line since 1941 when he was hired as a ticket agent.

**L. B. Anderson**, veteran C & S pilot and former chief pilot for both Delta Airlines, is now chief pilot of the Chicago-New Orleans route after creation of two separate flight divisions.

**Victor L. Haganman**, former flight captain for the line and, more recently, flight superintendent at Ford's Willow Run plant, joins Anderson in the new flight division plan and will act as chief pilot for the Detroit-Lansing route.

**George E. Koehler**, St. Louis station manager, has been named to the post of assistant to the superintendent of stations. With the line since 1941, Koehler was formerly associated with American Airlines at Lambert Field, St. Louis.

**E. W. Radulick**, chief of the requirements branch in the aircraft division of the War Production Board and in recent service, is joining the transportation department of Transcontinental & Western Air, Inc., in Chicago.

**Elroy Schwartz** (photo) becomes First American World Airways' first Atlantic Division advertising manager and will handle all ad work for the division in Europe, Africa, and India. He is a quiet, along with the new division, will be at Le Gardia field, N. Y. Formerly in charge of merchandising, copy, and production at the Rochester, N. Y., Times Union, Schwartz has been associated with advertising and printing interests for 15 years. His addition to the line's staff is called the beginning of an expanded program of overseas promotion.

**Ryan Johnson** (photo) has been promoted to the position of director of advertising and publicity for Continental Airlines. Previously, under the title of director of public relations, he handled only the publicity activities of the airline. Johnson joined Continental Air Lines in September of 1944 from the sales promotion and advertising division of the Golden Rubber Co. of Denver. He is a veteran of World War II, having served in the Army Signal Corps.

**W. Sanger Green**, formerly passenger and cargo manager, has been named general traffic manager of American Export Airlines. Under the reorganized line's department, being set up to handle the expected increase in trans-Atlantic travel, William Muller has been appointed passenger traffic manager, and Arthur Coffey made cargo traffic manager of the airline.

**W. Homer Kelly** has been named public relations director for Beech Aircraft Corp., a position which includes direction of the firm's advertising. Prior to joining Beech in the early days of the war, Kelly was associated with Western Lithograph Co. of Wichita, as vice-president, sales manager, and a director of the firm.

**W. E. Walk**, former Royal Canadian Mounted Police pilot, has been appointed manager of the western department of United States Aviation Underwriters, Inc., and will make his headquarters at the company's Chicago office. Ball began his insurance career in 1933, subsequently joining the Hartford American & Independent Co. in Philadelphia.

**Chicago and Southern Promotions:** Announcements of key personnel changes made last week by Chicago and Southern Air Lines included (left to right) Raymond G. Blair, named assistant traffic manager; Philip W. Parker, Jr., new city traffic manager for the line at Shreveport, La.; Gerald W. Davidson, new supervisor of reservations at the company's general offices, Memphis; Joseph A. Diamond, appointed chief traffic dispatcher; Victor L. Haganman, made divisional chief pilot of the Detroit-Houston route; and George E. Koehler, promoted to assistant to the superintendent of stations.

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## "Over the Hump With the Wind and the Rain... in my hair"

Based on a true story which has been heard of the Curtiss Commando



"A Girl Can't Say 'No'" when she's on her way to close up business. I don't know how many an American girl is married. Not even when she's asked to make one of the most daring flights in the world... over the 12,000-foot Himalayas... with inadequate equipment and no help from the sky of the year!"



"Smiling Through an airframe of blood-stained clouds that rush past at 100 miles an hour... through wild winds of shrieking snow... it was a trip that called for nerve... and called for an airplane that you built to take it. Yes, this wind and rain really got in our hair that time when we 'flying home'."



"Commando a Performance. As usual, the Commando came through with flying colors. And so she went on for our favorite customer on the world... and back to the States. What a worth it! Well, I hope it was worth so much to those boys as it was to me, to see them laugh and relax with a girl from home!"

THAT'S WHY  
I WANT TO RIDE  
THE AIRLINES THAT WILL

*Fly Commando!*



Design For High Living. New flying comfort aboard the Curtiss Commando is sure to delight your passengers. They will relax in the deeper, roomier lounge chairs... appear to enjoy several additional inches of leg room, and sleep for the night... And they'll enjoy the comfortable view from larger windows inside each double seat, when they Fly Commando!

THE CURTISS

*Commando*

Today's Great Lifeline  
Tomorrow's Great Airline

Curtiss

Wright

FIRST IN FLIGHT



The More The Merrier. The more luggage and cargo a transport can carry in its hold, the better the airline like it. A Commando has more for you, too. And the spacious Curtiss Wright V-tub also helps too, because the Commando is always so balanced, no matter where the cargo loads are placed.



How To Please A Pilot. Just let him Fly Commando! The cockpit is designed for easy, mental handling. Curtiss was in your seat of the pilot's on reaching back. Flight attendant seats are interchangeable right and left, and your passengers can be changed in less than a minute. So, Commando's speed, fast time at flight stops.

# H.C.\* helps Bennett buy more raw material

\*HC means hidden credit (Inventory)  
—used to verify for a bank loan



**1** Bennett had a chance to buy "surplus" materials. And then discovered that this fortunate "buy" was going to practically drain his cash reserve.

**2** Luckily, a LAWRENCE man dropped in. And it was then that Bennett learned an inventory was not a frozen asset, but actually "hidden credit."



**3** So Bennett field warehoused his raw materials through Lawrence System... presented his warehouse receipts to his banker... and received an inventory loan that more than covered his current needs!

**HIDDEN IN YOUR INVENTORY** may be all the credit you need for a loan! Whether it is grains or groceries, feeds or fertilizers, Lawrence Warehouse Company can help turn that inventory into working capital.

And the inventory remains right on your premises as raw material, during the pro-

cess of aging or curing, or as finished products. Lawrence simply acts as custodian.

Your banker puts his "ok" on Lawrence field warehousing... for he knows the 40-year record of Lawrence Warehouse Company in helping business men to obtain additional working capital. Send for new booklet giving full details. No obligation.

## LAWRENCE WAREHOUSE COMPANY

Field Warehousing

FOR BANK LOANS ON INVENTORY



New York, 72 West Street • Chicago, 140 So. State Street • San Francisco, 37 Bryant Street  
Los Angeles, 97 First Street • Dallas, 400 Commerce • Denver, 1000 Broadway  
Kansas City, 310 First • New Orleans, 100 Poydras • Philadelphia, 1000 Market  
Pittsburgh, 1000 Market • Portland, Oregon



## AIR FORCES

### COMMENTARY

## Ryan Fireball Composite-Engine Uses Turbo-Jet, Reciprocation

Twelve-hundred-horsepower Wright Cyclone in nose supported by Whittle type GE jet unit in tail to provide short, powerful, takeoff for carrier operation; small output continues for Navy.

Details concerning the Ryan FR-1 Fireball, which has been in production for the Navy for several months and which will continue on a limited basis, indicate an aircraft type of unusual interest.

Now that the Pacific war is over it is expected that official stories and photographs will soon be forthcoming. The strange features of the Ryan fighter, however, have been widely known throughout the industry for a considerable period.

**Carrier Problem.**—The turbo-jet unit at the present stage of development has the worst possible takeoff characteristics for use in carrier operations. The long takeoff run and general inefficiency at low altitudes and moderate speeds practically bar the pure jet unit as a power-plant for carrier-based aircraft. For this reason the "composite-engine" scheme appeared to offer a solution. This description is applicable to an aircraft having two power plants of different kinds. Thus the FR-1 has a 1,300-hp Wright Cyclone 3-1020 nine-cylinder radial engine in the nose to drive a propeller, and a General Electric turbo-jet unit of the T-series (Whittle type) in the tail.

The conventional engine-propeller combination alone is used for normal operations, and the turbo-jet power is added for the following requirements:

- A short takeoff run, such as from a carrier, from the deck of an Essex class carrier, for example, this would be somewhat less than 400-ft. A takeoff run with overland.

Under both of these conditions, JATO (jet or rocket assisted takeoff) can also be used. For combat operations where a special boost

for a high rate of climb or a high top speed is required.

It, and when, the reciprocating engine fails, a valued safety feature for single-engine fighters in over-water operations.

**Single Fuel.**—It is well known that turbo-jet units can burn kerosene, fuel oil, etc., but it is also true that with minor alterations in certain components they may use high-octane gasoline. It is natural, therefore, that in the composite-engine airplane the same fuel would be used for both the conventional engine in the nose and the turbo jet in the tail. This is particularly true in the case of carrier fighters in the Pacific, where problems of supply are paramount.

### Heinkel-Hirth Jet Data

The Heinkel-Hirth turbo-jet unit program began in 1936, and up to 1944 there were three experimental units and six proposed units. The first to be completed was the HE 8/3 unit which was installed in the HE-178 reconnaissance aircraft and test-flown in August 1939. The HE 8/11 was the outcome of development work on the HE 8/11, begun in 1944. It is a more powerful unit than the BSW 603 or the Jumo 004, and was scheduled to go into quantity production in 1944. It was to be the power plant of advanced versions of the HE-102 lightweight jet fighter, and certain versions of the JU-287 jet-propelled heavy bomber.

The OH has an impeller at the intake, and a compressor consisting of a diagonal stage and three axial stages. It has an annular combustion chamber with turbo-

charger fingers and 16 injection nozzles. The turbine wheel is of the axial 3-stage type, with hollow blades. An adjustable jet nozzle is fitted, having two positions, fully open for idling, and fully shut for all other conditions. Sea level static thrust is 2,000-lbs. Length, 3,510-mm.; diameter, 875-mm., and weight, 2,040-lbs. Fuel used is J-2 light diesel oil, and an estimated 45 minutes of the testing of the unit may be used by the U. S. Navy in due course.

NAVATION

## Army Radio Station Flown Into Japan

A complete, high-powered radio station able to furnish ground-to-plane communication, weather information, approach control, and communication with Okinawa, was flown into Japan and was in use within 45 minutes of the landing. The Army has revealed.

All necessary equipment, including jeeps on which were mounted control towers, was flown in 11 C-47's. Twelve more C-47's carried 140 officers and men to operate the installations. In command of the landing party was Col. G. A. Blase, commanding officer of the Pacific Wing of the Army Airway Communications System.

**VJ Square.**—The 24 planes were loaded in Manila and flew first to Okinawa. They waited until official news came of the surrender terms and then made the 1,000-mile hop to Atsugi airfield, outside Tokyo. The equipment was installed in the planes in 42 hours under the direction of Col. Reeder G. Michals, commander of the 80th AACGS Group.

### Sperry Radar Role

Sperry Gyroscope Co.'s part in the development of radar in the Pacific was not expected to have been based on initial research, at government behest during 1933, into ultra-high frequency radiation at higher levels of power than was possible at that time.

Scrambling through research was one of the first problems met by the company which then went on to production of many versions of radar intercept and gun and searchlight tracking devices. Present output is centered on automatic search, interception, and tracking devices for ground and airborne firepower.

# Government's Research Policies To Shape In Senate Next Month

Present trends point toward overall agency with no segregation of military and naval programs; hearings, spurred by President's message, slated to begin Oct. 2.

By WILLIAM KROGER

Senate hearings slated to begin early next month are expected to give the aircraft industry some hint as to future government policies on research, with present trends pointing toward an overall agency, and no segregation of military and naval research as outlined in some previous proposals.

Following up recommendations in President Truman's message, to Congress, hearings on research bills will start Oct. 2, before a joint subcommittee composed of members of the Senate committee

on military affairs and commerce. **Bills Pending**—Before Military Affairs is the Kilgore-Pepper-Johnson bill for a National Science Foundation, and before the Commerce Committee are the bills of Sen. Warren G. Magnuson (D-Wash.) for a National Research Foundation (AVIATION NEWS, July 30), and Sen. J. William Fulbright (D-Ark.) for a Bureau of Scientific Research in the Commerce Department.

Such a joint subcommittee is an innovation in itself, but the fact

## The President's Plan

Following are excerpts from President Truman's recommendation for a governmentally sponsored research program as taken from his recent message to Congress:

No nation can maintain a position of leadership in the world of today unless it develops in the full its scientific and technological resources. No government adequately meets its responsibilities unless it generously and intelligently supports and encourages the work of science in universities, industry, and in its own laboratories.

During the war we have learned much about the methods of organizing research and about the ways of encouraging and supporting its activities.

In order to derive the full profit in the future from what we have learned, I urge upon the Congress the early adoption of legislation for the establishment of a single Federal research agency which would discharge the following functions:

1. Promote and support fundamental research and development projects on all matters pertaining to the defense and security of the Nation.
2. Promote and support research in the basic sciences and

in the social sciences.

3. Promote and support research in medicine, public health, and allied fields.

4. Provide financial assistance in the form of scholarships and grants for young men and women of proved scientific ability.

5. Coordinate and control diverse scientific activities now conducted by the several departments and agencies of the Federal Government.

6. Make fully, freely, and publicly available to commerce, industry, agriculture, and scientific institutions, the fruits of research financed by Federal funds.

Scientific knowledge and scientific research have a complex and intertwined structure. Technological advances in one field may have great significance for another, agriculture, and science institutions, the fruits of research financed by Federal funds.

Although science can be concentrated and encouraged, it cannot be divided to be recombined. In carrying out research, scientists are free to follow the free initiative of the scientist. I affirm the fact that the Federal research agency here proposed should in no way impair that freedom.

## Experimentals

More than a score of experimental military aircraft are in various stages of construction at Southern California Industries, John C. Lee, president of Monaca Manufacturing Co., has informed the Los Angeles Chamber of Commerce aviation committee, of which he is chairman.

Lee was optimistic over the post-war prospects of the entire West Coast aircraft industry, and cited its possession of more than one billion dollars worth of military and civilian orders after VJ surrender.

**Future Factors**—He cautioned, however, that Southern California's future as a center of aircraft manufacturing will depend upon the resourcefulness of plane designers and builders—sound governmental policies on surplus development—continued experimental development by private companies—extensive support.

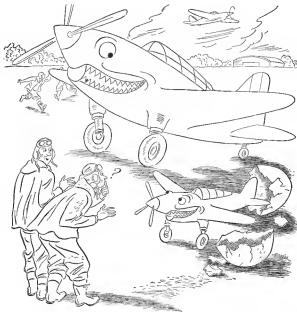
It is limited to members of the Military Affairs and Commerce committees is regarded as important. Before the committee on Naval Affairs are two proposals for expenditures on national security research alone.

The President's recommendations were brushed after consultation with Sen. Kilgore and Magnuson and more nearly approximate the objectives of the Kilgore-Pepper-Johnson measure. This is regarded by Congressional observers as pulling the rug from under the advocates of a separate armed forces research program.

**Still Request**—Military Affairs Committee is expected to ask that the bills of Sen. Harry F. Byrd (D-Va.), and a measure passed by the House, both now in Naval Affairs, be transferred to Military Affairs. There, they will be consolidated with one of the other proposals.

An additional possibility is seen in the unusual procedure adopted for hearing the research bills. This is that it prestage the formation of a standing Senate committee on research.

What loomed for a while as a dispute between Kilgore and Magnuson on the details of a Federal-sponsored research program is understood to have been eliminated in discussions between the two. Magnuson's personal does not contain what is seen to be the entire purpose of Kilgore's bill: the pro-



"Even if I reported this, the CO wouldn't believe it!"

So many new aviation ideas have been hatched during wartime that it is a pity for the general public to slip into the belief that major aviation progress is possible only during wars.

Nothing could be further from the truth. Most developments hatched as wartime discoveries were in practical use long before the beginning of hostilities. The seeds of war served only to speed their production. Furthermore, the emphasis on military aviation has tended to obstruct the development of commercial and private aircraft. Thinking must be made up by strengthening of research programs, rather than their abandonment.

For example, engines must be developed to fulfill the full possibilities of future aviation fuels from both performance and economy standpoints. Aviation gasoline has already been

through to "refining" of 180 octane. New refining methods and the use of Ethyl fluid have provided new fuels so high in anti-knock quality that some nations other than the "oil-rich" lands will be required to export their oil.

Post-war research workers, unhampered by the specialized requirements of military planes and fuels, may well make the gains after the war the truly great era of aviation progress.

**Ethyl Corporation**

Research engineers, new test city  
Manufacturers of Ethyl fluid, and by oil companies to improve the not-quite quality of aviation and motor gasoline.





*We are Signally honored.....*

# .....DOUGLAS AIRCRAFT COMPANY names GRAND CENTRAL AIRPORT CO. as "Authorized Conversion and Overhaul Center"

**GRAND CENTRAL AIRPORT....NOW GIVING NEW SERVICE TO THE AIRCRAFT INDUSTRY**



HERE'S A PARTIAL VIEW OF OUR CONVERTED AIRCRAFT. CONVERSION THROUGH GRAND CENTRAL AIRPORT, GLENDALE, CALIFORNIA. MAKING 5-10 AIRCRAFT CAN BE CONVERTED INTO 20-25 FOR COMMERCIAL AIR LINE USE.



## AIRLINE CONVERSION

Grand Central Airport Company is one of four hand-picked, prominent and long-established firms of top technical standing in America, selected by Douglas Aircraft Company to do airline conversion on Douglas Aircraft. Selected on the basis of "a long standing and enviable reputation in the aircraft industry," Grand Central Airport Company's experience in overhaul and repair plus quality interior work is proving invaluable on the DC-3 conversion line.



We have already completed our first reconversion job and more will be off the line shortly. We have also been doing, for some time, this same work for the U. S. Navy on Lockheed's as well as Douglas aircraft. Operating an approved C.A.A. repair station since 1929, we are in the fortunate position of having an extremely large group of highly skilled personnel, many with more than 10 years of experience with our company. We have experience—THERE IS NO SUBSTITUTE FOR IT.

## GRAND CENTRAL AIRPORT CO.

ESTABLISHED 1929

AUTHORIZED AND APPROVED SALES AND SERVICE FOR AIRPLANES AND ENGINES

**GRAND CENTRAL AIRPORT**

GLENDALE (LOS ANGELES CO.) CALIFORNIA

HOME OF FAMOUS CAL-AERO TECHNICAL INSTITUTE »

**Since 1929 DOING BUSINESS ON MERIT ALONE...our Policy...PRECAUTION...PRECISION...SAFETY**



**Automatic Trim Tab:** The new Curtiss-Wright "V-Tab" control surface, indicated by Berney Gray, test pilot, is being looked on as a great simplification measure in positive airline flight operations. According to reports of initial tests, the tab eliminates the necessity of continually shifting cargo and control surface adjustments as freight or passenger load is changed or altitude, the tab, fully automatic, is set at the initial loading and thereafter makes balance adjustments as the load and center of gravity change.

visions that any patents arising from Federally-financed research be made available without cost to all centers, on a non-exclusive basis.

**Free Access:**—An indication that the bill as finally adopted by committee will contain the reference to patents is the President's recommendation that the fruits of research be made "fully and freely available."

While it seems that armed force research will not be a separate program, it is simply provided for under both the Magnuson and the Kilgore-Pepper-Johnson bills. Additionally, the Air Force possibly will submit recommendations later to implement a half-formulated plan for taking into the AAF, direct from college, promising scientific workers.

## New Oil Linc

Anting a higher margin of safety and anticipating any designed increases in pressure or temperature ranges for Army and Navy aircraft engine lubrication and cooling lines, the United States Rubber Co. has announced development of a new synthetic rubber hose built for high pressure and heat.

According to the company, resistance to pressure is a one-inch diameter hose covered with "Uflex" chemically treated cotton yarn and shaped of the new heat resistant, synthetic rubber, is double that of usual hoses. In use as an oil line, the hose will with-

stand up to 250 degrees F. and up to 300 degrees F. for installations in cooling systems.

## Automatic Trimmer Handles 'CG' Shifts

A new trim tab device for transport airplanes has been developed by Curtiss-Wright to permit maximum loading of aircraft without consideration of weight distribution.

The new device is now being used on the C-46 Commando and, while it adds 10 pounds to the total weight, has resulted in an improved stability and a wide center of gravity range.

**CW-20 Delivery:**—The company reports that delivery of the CW-20 commercial Commando will begin soon after the first of the year.

Curtiss-Wright engineers report that maximum utilization of cargo and passenger space is the greatest boon of the new Curtiss V-Tab, which does not affect the airplane's speed and which operates automatically.

The company claims that use of the tab makes center of gravity a minor problem, that pilots do not have to trim ship while passengers walk back and forth in the cabin and that airline maintenance men will have to be concerned only with the total load of passengers and cargo, rather than figuring distribution of weight. In addition, the company asserts, it is not necessary to shift cargo from one compartment to another. Once the

aircraft is loaded, the V-Tab takes care of the plane's balance in flight.

## Inventory Retention Eased By Services

To encourage war contractors to retain for their own use inventories remaining upon cancellation, the War and Navy Departments have announced changes in the post termination regulation. The revisions are also designed to lighten up the sales of termination inventories.

The floor under the price the contractor must pay to retain the inventories has been removed. Formerly, he had to pay the "best price obtainable," but not less than 75 percent of cost. The latter restriction has now been removed. The contractor must warrant, however, that he intends to use the material in his plant and will not resell it. Price remains subject to government approval.

**Price Control:**—To control the sale of scrap salvage and other unserviceable items in the termination inventory, the regulation provides that such sales must be on competitive bidding, with the government approving the price. If a contractor desires to sell serviceable property, he must advertise it in a local newspaper for seven days in advance. Price cannot be lower than 50 percent of cost, and the government must again approve.

Those three requirements pertain to termination claims of more than \$10,000. Provisions for the disposal of small lots of termination inventory have been simplified, but the amount a contractor may dispose of without government approval being lowered from \$2,500 to \$500.

## Fire-Resisting Hose

A special aircraft fuel hose capable of withstanding intense heat for at least 30 minutes has been developed by the Air Technical Service Command as a result of experiments on fire hazards in aircraft. Ordinary hoses are resistant to great heat for only about three minutes.

ATSC's goal in the tests is to perfect equipment forward of the fire wall, and in engine nacelles, that will resist long enough for the fire to be extinguished before it can spread and cause an explosion.



With twin 3-bladed rotors interesting like the blades of an egg beater, the Belllett XR-6 presents a new and novel design in helicopters. A purely experimental model built for the Army Air Forces, the XR-6 has the advantages of greater power efficiency, reduction of vibration, reduced drag, and reduced power transmission requirements.

Reports from test pilots indicate that it is highly maneuverable, and since the rotors revolve in opposite directions, there is no need for a tail rotor to counteract torque. While no performance figures have been released, the ship is powered by a Franklin air-cooled 245 h.p. engine using CECO fuel pumps.

Chandler-Evans is proud to have a small part in this new step in helicopter development. And as Chandler-Evans has always kept ahead of the newest and latest in America's other great war planes, so will it continue to serve the aviation industry when once again it turns to peacetime production.

The Belllett XR-6 has all the remarkable helicopter characteristics of varied use and design, ability to hover, and to fly backwards and forward as well as forward. (Belllett Aircraft photo.)



**CARBURETORS  
FUEL PUMPS  
PROTEK-PLUGS**

**CHANDLER-EVANS CORPORATION**

**SOUTH MERIDEN  
CONNECTICUT, U.S.A.**



## Bell Output Plans Center On 'Copters

Concentration on production of commercial helicopters has been revealed as Bell Aircraft Corp.'s main objective in the postwar aircraft industry.

With discontinuance of B-29 production at Marietta, Ga., and a reduction in RF-85 output at Buffalo, the company has begun negotiations to acquire the government-owned Niagara Falls plant for its helicopter work.

**Four Models.**—Our company is going into helicopter production on a big scale," President Lawrence D. Bell says. "We have developed four different models in the past few years. The helicopter will have great value to the military and also will be of utility to the ordinary man.

"In from seven to 15 years, there will be a helicopter industry

greater than the peacetime aircraft business."

Bell does not expect the helicopter to compete with the automobile or the airplane.

"It is a short-range utility machine," he explains, "operating at ranges agreeable for the plane and long for the auto. I believe the helicopter represents a brand new method of transportation, operating from door to door, you might say, both in heavily built-up and less populated areas."

### Goodyear War Output Rose Above Half-Billion

Goodyear Aircraft, in a review of wartime production, reports an output of nearly \$196,000,000 worth of aircraft, airframes and component parts.

Officials said that in the period from October, 1943, to VJ Day, its workers, reaching a peak of 33,646,

turned out more than 4,000 complete PG-1 Corsair fighter planes; sold over 150 complete K and M type airships and thousands of sections and parts for more than 30 types of airplanes. Plans sets included 13,722 elevators, 12,652 fins, 13,799 radars; 13,368 stabilizers, 8,433 ailerons; 14,532 airboard flaps, 13,655 airboard flaps, and 5,685 wings. In addition, 650 fuselages and thousands of spare parts also were completed.

**Other Plans.**—Contracts other than for the Corsair and airships included those of the Boeing B-29; Northrop P-61, Lockheed's P-38 and PV Ventura, Grumman's TBF Avenger and F4F Hellcat; Martin B-26 Marauder and B-24 Liberator; Consolidated B-24 and PB2V Coronado and the Curtiss P-40. The company started with only 40 employees when it took its first war contract, in December, 1939.

## 'Practical' Research Urged In England

British plane manufacturers, turning from fighters to civil aircraft, urge the continuance of practical research in aeronautics.

Arthur Gough, president of the Society of British Aircraft Constructors, Ltd., emphasized this when, after describing the past done by post research in the R. & D. of Britain, he said that "active and continuing great effort in practical research" will be needed, "not only to produce still better combat aircraft but also better transport aircraft and better private planes."

**Research Center.**—He predicted help from a British government plan for an aeronautical research center and provision of new and better research equipment to industrial companies.

Mr. R. R. Kilmer, deputy president of the SBAC, assistant speaker at the opening of a London exhibition of paintings of British aircraft, asserted that the British plane building industry is convinced that it can produce aircraft "as reliable, and with a performance as high, as anything which can be produced by our competitors."

The manufacturers, he asserted, are taking advantage of rapid development in aeronautical science in civil air transports. The British are building "it may prove that 'marking time' may not be altogether to our disadvantage," he concluded.



## Aeroprops for Extra Service Smiles

*This General Motors Propeller Is Engineered for Easy Maintenance*

THIS WAR has proved that easy maintenance is a "must" in any aircraft part. That's one of many reasons why the Aeroprop is in such demand today, and why it will serve you so well tomorrow.

The Aeroprop is remarkably clean and simple in design. It can be inspected and serviced in record time. A single blade, or the complete propeller, can be removed

and replaced in a matter of minutes. In war, that means fewer hours wasted on the ground. In peace, Aeroprop simplicity will help to shorten maintenance time and contribute to the economy, efficiency, and reliability of commercial flying.

This General Motors Propeller is one of many war-proved developments that will serve the fly-

ing public when the achievements of America's aircraft and accessory industries are converted to plans of peace.



**Aeroprop Advantages—**Lightness for payload... Strength for safety... Simplicity for easy service... Faster Airframe Check Change for flight efficiency... Full Protection for engine protection... Engineered for reliability.

# Aeroprop

LIGHT • STRONG • RELIABLE

AEROPRODUCTS DIVISION • GENERAL MOTORS CORPORATION • DAYTON, OHIO

*Keep them flying—Buy Another War Bond!*

## Five Air Firms List Sales Data

Five aircraft manufacturing companies have included the \$3 corporations reporting their total sales, the relationship of war contracts to each sale, and the amount of unfilled war contracts on their books at the end of various fiscal periods, to the Securities and Exchange Commission.

Total sales for all five companies for the various periods covered amounted to \$1,485,396,000, of which \$721,386,690, or 37 percent, was war business. War contracts included in the periodicals aggregated \$1,796,288,900.

**C-W.**—The Glenn Hughes data for Wright Aeronautical Corp., which are also included in the consolidated statement reported by Curtiss-Wright Corp., is as follows:

Reporting for the period from April 1, 1943, to June 30, 1943, Curtiss-Wright showed total sales of \$486,300,000, of which \$381,800,000 represented war contracts. At the beginning of the period the company had a total of \$2,004,000,000 of war contracts on its books, of which \$1,819,503,000 were unfilled at the end of the period.

**Boeing Aircraft Co., Inc.**, reporting for the period from Dec. 1, 1943, to May 31, 1944, showed total sales of \$259,643,000, of which \$168,727,000 represented war contracts. At the beginning of the period the company had on its books war orders aggregating \$1,241,000,000, of which \$923,511-

300 were unfilled on May 31. **Wright Aeronautical Corp.**, in its report for the period from April 1, 1943, to June 30, 1943, showed total sales of \$195,481,000, of which \$154,356,000 represented war contracts. At the beginning of the period the company had on its books \$1,229,353,000 of war orders, of which \$1,102,551,000 remained unfilled on June 30.

**Boeing Airplane Co.**, in the period from April 1, 1943, to June 30, 1943, had total sales of \$196,925,000, of which \$165,313,000 represented war contracts. At the beginning of the period the company had \$1,130,073,000 of war contracts, of which \$1,164,476,000 remained unfilled on June 30.

**Ryan Aeronautical Co.**, in the period from May 1, 1943, to July 31, 1943, reported total sales of \$43,067,000, all of which were payment to war contracts. At the beginning of the period the company had an estimated \$1,600,000 of war orders, and had on its books as of July 31, an estimated \$16,000,000 of such business.

**Fisher Aircraft Corp.**, reported for the period from Oct. 1, 1943, to June 30, 1944, showed total sales of \$5,316,000, of which \$4,945,000 represented war orders. The company had an estimated \$6,500,000 of such orders on its books at the beginning of the period, and \$7,243,000 of unfilled orders on June 30, 1944.

# The Birdmen's Perch

By Major Al Williams, ALIA, "TATTERED WING TIPS,"  
Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh 30, Pa.

Will they did it! And hatched 316 lbs off the gross weight!  
How about that?

## INSTRUMENT COURSE, CONT.

As we were saying last month, those old instruments of yours are crucial guides. We can tell you just about what we do to Gulfplane G-2. We can tell you how we begin with the very basic checks, and subject them to the most efficient reworking methods we know of. We can tell you just what they've been reduced or given them an even springing treatment called the "Aldrich Process."

And we can tell you that last step gets even extra carbon markers and change factors out of Gulfplane than you could think a piston air.

But while we can tell you what we do to Gulfplane, we can't tell you what your engine does or that's up to your oil insurance.

Your oil pressure gage, for instance, is probably indicating one of the following when it reads too high:

- Oil temperature too low.
- Oil pressure relief spring broken or stuck.
- The high viscosity indicator.
- Relative gap.



Next month, we'll cover indications of the oil temperature gage. Meanwhile, you'll have enough time to test your engine on both Gulfplane.

## LITTLE KNOWN FACTS DEPT.

Here's the 3rd Little Known Fact About Well Known Planes we've run from George Clay, of Dallas, Texas!

The mean that with 2 more Pencil-factoring enough to meet our lady standards, and accompanied with pencil-Pencil Pilot George Clay will become a Senior Pencil Pilot.

What a mean, he'll be the first Senior Pencil Pilot to be commissioned!  
Unless someone else beats him to it, that is. Here's his 3rd accepted Little Known Fact.



The most popular light plane is owned for more "G's"—ground for pound—than any commercial airliner!

A confirmation is on the way to H. R. Kase, AAMM 1st, Hagan, Ky. 9-3, c/o Fleet Post Office, New York, N. Y., Inc.

Just the waiting on a P-1 is more expensive than most P-1's!  
In W. M. Bullock, LAAR, Laredo, Texas, runs a commission with.

It requires approximately a horsepower to protect the landing gear of the B-29's!

If you haven't got a Pencil Pilot's commission yet, send us a Little Known Fact like those above.

If you have been commissioned, send 4 more Pencil and we'll present you to Senior Pencil Pilot!

The address is on top of the page, above.

Gulf Oil Corporation and Gulf Refining Company...makers of



OR, IF AMBIVISION—USE IT MYSELF

## B-25 Airliners

The modification of five B-25 Mitchell bombers into fast transports for high-ranking military personnel, by North American Aviation, has aroused considerable interest in respect to the commercial utilization of surplus military aircraft.

The modification consists solely of changes in the interior of the airplane. A standard Mitchell is stripped of all extraneous armor plate, radio, and miscellaneous military equipment. In their places are installed a new section which contains all radio equipment, heating and ventilation apparatus; sound-proofing, double windows and furnishings, baggage section, lavatory, sleeping compartment and passenger cabin.

**Pink Seal**—The resulting transport will carry six passengers with a crew of two. Range is approximately 2,000 miles at a speed of 180 mph. at 10,000 ft. With passengers and crew, plus 900-lbs. of baggage, the airplane weighs 24,000-lbs.

One of the main points in favor of the conversion is a simplified maintenance and supply problem. The transport meets standard B-25 parts which are in abundant supply.

## Continuous Flow Fuel System Set For Army

A continuous flow fuel system, replacing fuel tank selector valves, will be installed in all military aircraft, according to Air Technical Service Command.

The new system, developed at Wright Field by ATSC engineers, is said to eliminate practically all chances of accidents arising from the older method of manually switching from one tank to another.

**Float Valve**—Based on a simple arrangement of float lines and the use of a float-operated valve, the system provides a continuous flow of fuel without change in pressure.

Formerly, a pilot had to switch a fuel tank selector valve to the main tanks at takeoff, then change over to auxiliary tanks during flight and, when those were empty, switch back to main tanks. This procedure allowed a great chance for human error. The ATSC development, being fully automatic, need not require operation by the pilot.



SPECIFY AS

Standard

MODELS  
4000  
and  
4100

Here the piston pin, which holds the two halves of the connecting rod, is shown in its position, ready to be inserted into the connecting rod.

Designers and engineers welcome the patented Scott Master Cylinder, a highly efficient power generating device for use with master hydraulic brake systems. Available in two sizes with displacements of .38 cubic inch and 1.2 cubic inch. Built for pressures up to 1200 lbs., with design operating pressure of 450 lbs. when installed as Illustrated. Adjustable in length, both sizes are interchangeable. No internal valves or small parts to wear plates. Reverse motion not extended. Easy to bleed throughout, a dependable Scott quality built product—one which you can "specify as Standard" with complete confidence.



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1922

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AVIATION CORPORATION

304 EDD STREET  
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# They'll feel they're going really modern



## TRAVELING ON **FOAMEX** COVERED WITH *Velon*<sup>®</sup>

TODAY'S PASSENGERS are travel-safer — tomorrow's will be travel-wise. Gain and maintain travel leadership by giving them more beauty, more comfort. It's easy, it's profitable with Firestone's amazing materials, *Foamex* cushioning covered with *Velon* upholstery fabric.

Together they are the perfect seating combination—deep-cushioned comfort, high eye-appeal—both so practical that maintenance cost is brought down to almost zero.

**Consider the glamour of interior of *Velon*.** In any color, from palest pastel to deepest jewel tones, in a wide range of patterns, textures and weaves, *Velon* fabric stays ever new, fresh and beautiful. Dirt and grease cannot cling to its non-porous threads, nor can acids and alkalis stain it, so *Velon* stays clean longer. A cloth dampened in water or cleaning fluid restores its original beauty. As seat covering, curtains, wall lining, shades and trims, *Velon* can be exposed to the brulking sun's rays without fading or becoming over-heated. It is perfectly flexible, yet cannot sag, buckle or "grow" out of shape, so resistant to abrasion that it does not snag or scuff.

**Consider the comfort of *Foamex* cushioning.** Millions of tiny air-and-latex bubbles float the passenger in blissful relaxation. Each bubble is a perfect shock absorber, an air-breathing ventilator, an air-valve yielding gently to slightest pressure, resilient under heaviest weight. *Foamex* replaces old-style springs and stuffing with one welded-together material, sag-proof, lump-proof. Both *Foamex* and *Velon* have proved themselves in transportation seating through years of wartime abuse. *Foamex* is now electronically processed to ensure even longer wear.

The demand for *Foamex* to cushion men against shocks of battle has been satisfied. The need for *Velon* to protect them in scorching tropics has been filled. Now *Foamex* and *Velon* will be available to you, to attract passengers with beauty and comfort, to keep your maintenance costs way down. Start specifying this revolutionary seating combination. Write Firestone, Akron.



LISTEN TO THE VOICE OF FIRESTONE AUTHORITY ENGINEERS OVER NBC



# Firestone

—TRUSSARDI



# AIRBORNE DEHYDRATING EQUIPMENT



This D-10 Dehydrator Unit for the E-29 Bomber is just another practical application of the Russell R. Gannon System for the control of moisture content, relative humidity, and dew point of air and gases. This unit including its dehydrating chamber weighs but four pounds and has a moisture pickup capacity of 50 grains of water while maintaining a dew point of 92° F below zero.

The Gannon System is applicable to many other

dehydrating problems, and usually eliminates expensive and cumbersome installations.

The dehydrating chemicals are so inexpensive to replace as to be expendable at a negligible cost. Precision tested dew point color change indicators are available to insure accuracy of working conditions.

If you have a dehydrating problem, contact Gannon. Gannon's Engineers welcome your inquiry.

*Russell R.*  
**GANNON Co.**  
AIR CONDITIONING EQUIPMENT  
Cincinnati 2 • Ohio

## FINANCIAL

### Alaskan Air Operations Report Gains International Significance

Territory's position as a hub of great circle operations sheds new light on Aeronautics and Communications Commission yearly survey; commercial records increase; private flying boom predicted.

With post-war planning placing Alaska as a hub of world aviation operations, the report of the Supervisor of the Alaska Aeronautics and Communications Commission on aircraft operations during the past June 30 fiscal year takes on more significance than in previous years.

The great circle routes to Manila, Hong Kong, Calcutta, Bombay and Tokyo are by way of Alaska. In addition to expansion of commercial air transportation facilities, the Alaska Commission points out in its report, that technical developments predict a large volume of post-war private flying. "We have every reason to expect an aeronautical future for Alaska," says the department's report.

**Flight Mile**—Miles flown in the territory during the year ended June 30, 1945, were 24 percent above the previous fiscal year, being 4,066,361 as compared with 3,275,434. In 1945, miles flown were only 3,790,569.

Passenger miles flown during the year under survey reached 15,047,039, an increase of 31 percent over the 12,943,118 reported

in the 12 months ended June 30, 1944. In the 1945 period, passenger miles flown were 10,181,969.

Pounds of freight flown into the territory were up 12 cents to 3,566,876. In the year ended June 30, 1944, pounds of freight totaled 3,165,028, an increase of 6 percent over the 2,927,167 pounds the year before.

**Postal Drop**—Mail flown in, however, fell off 7 percent to 905,264 pounds. The 1944 fiscal year total of 902,901 pounds was 25 percent below the 1,246,932 pounds flown in the year previous.

The accompanying table presents Alaskan aircraft operations on a yearly basis since 1939: There are only 500 miles of railroads and 1,000 miles of vehicular roads to serve an area of approximately 660,000 square miles, thus making air transportation the most logical solution for the lack of other methods of travel. Flights operate in and from communities which have no other communications with the outside world other than occasional mail during the summer months. Only 200 communities have post offices. Ap-

proximately 250 communities have no communication.

Pointing to the exorbitant construction costs which will prohibit for some time the opening of extensive roads, highways, telephone lines, and year around plane service in hundreds of isolated communities, the Commission emphasizes the necessity of knitting these communities together with a flexible, inexpensive and reliable radio telephone communications system. The Commission is endeavoring to secure 100 additional complete stations to install in various isolated communities.

### Canadian Helicopter Production Begun

Engineering Products Ltd., Montreal, has started production of the Sanyer and Gottlieb helicopter, SG Mark II, a three-passenger model designed for volume production.

It is reported the first model may cost about \$80,000 after which production costs will decrease. The craft will have a top speed of 110 mph, a cruising speed of 80 mph and a payload of 600 lbs.

**Synthetic**—An international syndicate is sponsoring the production of the helicopter at Montreal, members including J. K. Saurat, of Seward Hodges & Co., Montreal; Capt. Norman Edgar, of Western Airways Ltd., England; R. J. Curtis, Provincial Transport Co., Montreal and Bernard Sanyer, New York aeronautical engineer.

### Lightplane Hydraulic Unit Built By Adel

A new hydraulic power package has been developed by Adel Precision Products Corp., Burbank, Calif., to provide a compact, light weight source of power for actuation of landing gear and wing flaps in light aircraft.

The package, adaptable to non-ferrous materials, comprises an electric gear type fluid pump, visual reservoir, adjustable pressure relief valve, thermal relief valve, a cylinder-by-pass valve and four-way selector valve connected to manual control. Overall size is four inches diameter, nine and 3/16 inches high. Weight, filled, is 4.075 pounds, empty 4.60 pounds. Four fittings are required to connect.

#### ALASKAN AIRCRAFT OPERATIONS

	Miles	Passenger Miles	Freight	Mail
<b>Year Ended June 30:</b>				
1939.....	219,422	694,262	153,843	15,609
1940.....	322,254	940,716	251,717*	
1941.....	742,554	2,462,776	496,638*	
1942.....	1,029,115	3,222,516	634,616	351,579
1943.....	1,396,625	4,823,711	869,728	464,328
1944.....	1,850,424	5,218,602	1,496,917	229,449
1945.....	2,130,269	5,226,214	2,136,866	279,749
1946.....	2,304,299	4,627,597	2,940,725	364,905
1947.....	2,938,256	5,029,401	3,415,759	342,776
1948.....	3,217,047	5,801,232	3,811,739	426,276
1949.....	3,594,190	6,215,364	4,315,659	611,429
1950.....	4,066,361	7,151,534	4,947,516	674,428
1951.....	4,752,855	7,126,718	5,428,546	742,428
1952.....	5,041,099	10,007,969	5,617,795	1,004,917
1953.....	6,011,434	12,695,239	5,698,365	982,805
1954.....	6,966,361	15,047,039	7,906,976	915,254

\*Mail and freight combined.



## WITH THE ARMED FORCES

*Everywhere..*

During the war Beechcraft received thousands of letters from members of our armed forces in training camps and on battle fronts everywhere. The following excerpts gleaned from just a handful of these letters on eloquent testimony of how well Beechcraft did their part in the war. The same good opinion of Beechcrafts held true by service men and women will be earned also by Beechcraft's new postwar models.

### Somewhere in the Pacific

"We know I've never been any place yet where they don't have some Beechcrafts and I don't see how I could ever find a place that doesn't have them. . . D.R., Army 5/2"

### Oahu, Hawaiian Islands

"Get quite a thrill whenever I see an A-11 (Beechcraft) out here. Was out on an air trip and had an opportunity to see them operate. . . C.M.F., PhM 5/2"

### Guantanamo

"I have seen several Beechcrafts in my trip and they looked mighty nice. . . E.V., Cpl"

### Philippine Islands

"Talked with some Air Corps boys and I wasn't surprised when they said the Beechcraft is the most reliable plane they ever flew. I guess that's why the generals use them. . . V.K., Sgt"

### Caracas

"I have seen Beechcrafts from one to a dozen in almost every place we have been to. They have really done a swell job. I first came southeast, but in our marine zone, came off Caracaras where it fell, in one of them. He says an expert will never look any better in his than a Beechcraft. . . R.E.B., P 1/2"

### China

"The one thing I want to do is to repair a Beechcraft, but that will probably never happen as the plane is one half of a good ship. . . D.J.S., Piz"

### Java, India

"There's a lot of islands between Java and Sumatra, and on every sea I haven't missed seeing a Beechcraft. . . B.G., 3/Sgt"

### Anson, India

"Even now in CBI and ATC operations, I see the (Beechcraft) C-45 and AT-1 in contact."

use, and everything has in perfect agreement whenever I go as to quality and performance. . . J.R.H., Lt. Col."

### Mythias, Russia

"A lady of mine once here is a former Beechcraft AT-11 pilot for bombardier training. We've both flown the T-6 and also the T-6 and I might say that they are the finest and easiest handling ship of the Air Corps here. . . W.F.R."

### Admiralty Islands

"Recent pictures of Beech planes around the globe proved me to affirm just that even here in the Admiralty Islands is doing its part - and well. For duty can see on the line GB-7's and even C-45's. The entire flight crew has a good word for the plane. . . E.T.A., Lt. Col."

### In the Atlantic

"No matter where I go you will see a Beech and you have been in some rather remote spots. Lots of planes come and go but every one stops to see a Beech take off at least. . . P.W.W., ASMP 2/2"

### Greenland

"Cops was the day of the Arctic Search and Rescue squadrons, and now and"

then we would get calls from a ship which we lost. We had two Beechcraft AT-7's stationed there and they were proved to be as reliable as the rescue missions they performed. . . J.W.D., Col."

### North Africa

"Early do I find an Army, Navy or Marine base where I have seen a Beechcraft in use. I've seen it in a really a small plane. . . V.G.R., Piz."

### France

"I saw an AT-11 (Beechcraft) the other day. I know you would have been pleased with many favorable comments of evoked from both the pilots and the mechanics. I seem to be a characteristic of most of these airplanes to find with any and all transport ships but they're 'mighty big' and good in any air 'crazy baby'. . . C.K."

### Bombays

"Over here Beechcrafts are thought very highly of. They are known to the American of greenish. Reliable enough for a general and when a guy who has his choice like this pilot they know the plane is good. . . E.D.F., Cpl."

### France, Central America

"I have been in several places in Central America among good old Beechcrafts every place. . . J.W.D., Col."

### Florida

"The general of the camp in Florida where I am stationed has a C-45 which makes me happy for Beechcraft such like I use it. I've even had a side in it - it's really a small plane. . . V.G.R., Piz."

### Texas

"Beech is the most place I have ever worked in my life, and not only that, but the pilots say the AT-11 is the best plane also. . . V.G.R., Cpl."

### California

"The pilot like the Beechcraft and the men who ride in them give many compliments to the reputation Beech has built in the past will pay off in the end. . . E.H.G., AMN 2/2"

### State Road

"I certainly like the Beechcrafts to do all the jobs. . . V.L.T.; 3/Sgt."

### Note

"Grateful of these letters are on file at the Army Corporation's office in Wichita."

## TRANSPORT

# Expect Early Decision By AA On Five Proposed Planes

Boeing, Consolidated, Curtiss-Wright, Martin and Douglas offerings are submitted to airline employees for opinion.

By MARTIN V. MERRITT

An early selection by American Airlines of the plane it will order for short-range flights to supplement its fleet of DC-4's and DC-6's is seen in a message to American employees which asks their opinion of the planes under consideration. The airline has prepared a brochure which describes the five planes on which both have been submitted and asks its employees to indicate in a poll which would be their choice, setting an early deadline "since the company is endeavoring to notify the successful bidder at the earliest possible moment."

American Airlines recently asked plane manufacturers to submit proposals on specifications drawn up by the airline (AVIATION NEWS, August 13, p. 47). The new plan, intended for use in 1947, calls for seating approximately 30 passengers, 275 miles an hour cruising speed, tricycle landing gear, larger cabin windows, bigger passenger door and several other details. The airline, according to its announcement, plans to use DC-4's and DC-6's on long distance flights and between points of heavy traffic density and use the newly designed plane for shorter operations.

**Five Planes**—Five manufacturers submitted bids and planer Boeing, Model 432-18; Consolidated, Valtec, Model 116; Curtiss-Wright, Model C-45; Douglas, DC-3; Martin, Model 302.

Essential features common to the five planes indicate a trend toward increased payload without increased operating cost and to facilities that will permit quicker operation at landings, even as baggage made within the cabin, quicker refueling, and more rapid loading and unloading.

Asked why the opinion of every employee of the airline was solicited in the selection of the new

plane, an American spokesman said:

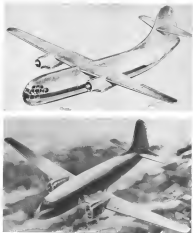
"The engineering department recognizes that no one department of the company can anticipate all of the various problems which may arise in connection with new plane. A feature which

seemed all right in the blueprint stage may prove to be a bug which a field agent could have detected beforehand. In the same way, a reservation or ticket girl may have a valid criticism which may bring about a change in design. We feel that everyone in the American organization has a voice in the new planes and should be given a chance to participate in their selection."

## Delta Airliner Needs Shift To Larger Types

Although Delta Air Lines plans to use Douglas DC-8's when it starts its new Chicago-Miami route later this year, studies are being made now to determine what larger equipment may be best suited to the operation later.

Under consideration are Lockheed's 48-passenger Constellation,



Two of the Planes Being Considered by AA. Above, the Boeing 432-18, and below, the Curtiss-Wright CM79. Drawings of the DC-8 appear on page 13 of this issue. Drawings of the Martin 302 and the Cessna 110 have been published previously. (See comparative table of specifications on the following page.)

# Beech Aircraft

 CORPORATION  
BEECHCRAFTS DID THEIR PART WICHITA, KANSAS U.S.A.

Douglas' 44-passenger DC-4 and 36-passenger DC-4A, Curtiss-Wright's 36-passenger CW-30. The first airplanes a "substantial increase" in its fleet, now consisting of 12 DC-3's of which three are being converted, for the new operation. A conversion line will be set up in Atlanta to modify Army transports that become available. The company estimates that 800 additional personnel will be required—returning veterans will be given preference—and more than \$5,000,000 will be required for flight equipment and ground installations.

**Revised Route**—Delta says the new route (AVIATION NEWS, Aug. 27) is the longest single domestic route awarded since the Civil Aeronautics Act of 1938 was passed. It will add 1,320 miles to the company's present system, and serve 10 additional cities with populations totaling more than 4,000,000.

Four new flight patterns are planned, with mileage and flight times based on local schedules: Chicago to Miami via Asheville, 1,380 miles, 8½ hours; Chicago to Miami via Atlanta, 1,331 miles, 8½ hours; Chicago to Charleston, S. C., 613 miles, 4½ hours; St. Louis to Miami, 1,476 miles, 16 hours.

#### Export Ticket Sales

American Airlines, which flew 72,516,450 revenue passenger miles over its domestic system in July, has announced that its ticket

counters throughout the U. S. will make reservations for businessmen contemplating air travel to Europe over American Export Airlines, recently acquired by AA.

Report flies three round trips a week between New York and Europe, then via Montreal. Direct connections are made to London. America's July figures as revenue passenger miles were 36 percent higher than those for July, 1944.

### Airline Radar Tests Expected To Grow

Possibility that the airlines may have a chance to test their Army radar equipment that the 16 low altitude altimeters now being tried out by the current is good, according to Aeronautical Radio, Inc.

Some navigational equipment will "come along in time," officials said. They are waiting until its military classification is reduced so it may be released to the commercial operators.

**Planes Listed**—The radar altimeter, which is independent of variables affecting the pressure type of altimeter, has been placed in two planes each of American Airlines, Eastern Air Lines, Transcontinental and Western Air, and United Air Lines, and one each of Northwest Airlines and Pennsylvania-Central Airlines.

Others may become available soon for testing by other lines.

Whether the airlines will want to purchase such equipment will depend on the tests, reports on which are not expected for some time.

Each installation of the radar altimeter weighs about 30-lbs., but air radio men are hopeful that this can be lightened. Work to this end is now under way.

#### TCA DC-4's Expected

One of the DC-4's on same sections of Trans-Canada Airlines' route across Canada is in prospect for early in 1945. The exact date is indefinite, as plans to make the aircraft for commercial use at the government's Canadian Ltd., Montreal, were scrapped some months ago and materials turned over to the Royal Canadian Air Force to produce C-47 transports for Pacific operations.

Now that the need for these RCAF transports has dropped with the end of the war, it is expected that work on the commercial DC-4B, at the Canadian version is known, will start at once.

#### ATA Western Meet

Presidents of all major airlines having western interests are being asked to attend, at Salt Lake City September 24 and 25, a meeting to further develop the public relations program of Air Transport Association's state relations committee.

### PAA Proposed In South Atlantic

Pan American Airways was recommended for an overseas route from New York to Johannesburg, Union of South Africa, by way of Lagos (Africa), Dakar (French West Africa), Monrovia (Liberia) and Leopoldville (Belgian Congo) in a report to the Civil Aeronautics Board late last week by William J. Madison and James B. Keith, CAB examiners in the South Atlantic case. The examiners recommended details of all other applications, including those of American Export Airlines and Pennsylvania-Central Airlines, only operating applicants in the case.

Pan American witnesses said during the hearing last January (AVIATION NEWS, Feb. 23, pg. 48) that if their company were authorized to operate by way of the Azores the carrier would abandon the Caribbean-Brazilian-South Atlantic route for which it had been temporarily authorized.

### New Detroit Plan Asks Canadian Port

The Detroit Metropolitan Aviation Authority, under AR against Detroit Board of Commerce proposals, has urged the location of the area's major airport in Canada or, alternatively, development of an 1,600-acre site at Ford and Gully Roads that has been recommended by the Michigan Aeronautics Commission.

The planning body reviewed the possibility of using Wayne County Airport at Romulus as an interim stop because of "dangerous congestion" at the present municipal airport. The regional authority of St. Paul-Minneapolis, meanwhile, provided a model on which a Detroit engineering firm surveyed the situation recommended that Detroit establish a regional program to provide 44 airfields of varying sizes for various uses.

**Centralization**—The Authority adopted a resolution to eventually centralize all control of airports in the metropolitan area in a single authority.

A representative of the Oakland County Board of Supervisors cast the vote dissolving vote on the resolution, with the explanation



### TWA'S QUONSETS HELP TERRE HAUTE:

TWA adapted and connected two Spruce-Steel Quonset Huts, originally made for the Navy, as an administrative building at Hahnemann Airport, Terre Haute, Ind., in a move that helped the city get on the savings map in advance of its post-war plans.

that the Board had instructed him to support the proposed Northwest airport site sponsored by the Detroit Board of Commerce and favored by the airlines.

### ATC Peace Plans Partially Revealed

Fleet to lose about 2,350 transports, more than half of routes and personnel; equipment held for airlines.

The frequently asked question of what will happen to the Air Transport Command after the war, was partly answered last week when the War Department announced that:

**ATC's fleet** will be reduced to approximately 600 transports by July 8, 1945, from the present figure of nearly 3,000 transport planes (War Department said "large numbers" of transport aircraft, including C-47's and C-49's, are being released for disposal as surplus, and a "great number... presumably" will go to the commercial airlines).

**The more** than 120,000 military personnel will be cut to 50,000 or less within 18 months.

**Home** miles will drop from nearly 100,000 now to approximately 10,000 on a world-wide basis to about 70,000, by mid-summer of next year.

The command will continue through service between the U. S. and Asian occupational forces overseas, but local intra-theater

services in the European and Pacific theaters will be turned over to air force units in those areas. Ward, the famous route over the Hump between India and China is expected to exist no longer after an East China coast port is opened, and ATC thinks its CBS operations will be cut in a few months to through services required by military and other governmental agencies and return of personnel.

Fights between New York and Paris will continue, and the command will send until the commercial airlines are operating the route from Paris through Rome, Athens and Cairo before it discontinues its flights there. It may operate to Berlin and Frankfurt, if theater commanders so desire.

### Lockheed May Announce

#### Consultations for KLM

Lockheed soon will announce KLM Royal Dutch Airlines as a buyer of an improved version of the Constellation. Negotiations were completed by Henry Veenendaal, KLM sub-director, who has been in Southern California for nearly a month shopping for equipment to restore the company's war-halted operations. Negotiations were completed by Henry Veenendaal, KLM sub-director, who has been in Southern California for nearly a month shopping for equipment to restore the company's war-halted operations.

Constellation. Negotiations were completed by Henry Veenendaal, KLM sub-director, who has been in Southern California for nearly a month shopping for equipment to restore the company's war-halted operations. Negotiations were completed by Henry Veenendaal, KLM sub-director, who has been in Southern California for nearly a month shopping for equipment to restore the company's war-halted operations.

### Comparison of Five New Transport Models with the Douglas DC-3

	Five-Prop. Douglas DC-3	Boeing 410-15	Consolidated Pallas 110	Curtiss- Wright CW-30	Douglas DC-4	Boeing 367
Seating Capacity (1)	28	36	39-47	30	34-45	39-42
Weight Gross	25,000 lbs.	36,000 lbs.	32,000 lbs.	46,000 lbs.	34,000 lbs.	34,000 lbs.
Weight Empty	17,500 lbs.	26,000 lbs.	25,000 lbs.	37,000 lbs.	28,000 lbs.	28,000 lbs.
Dryload and Fuel	7,700 lbs.	11,400 lbs.	10,000 lbs.	13,000 lbs.	14,000 lbs.	16,000 lbs.
Cruising Speed	185 mph.	202 mph.	203 mph.	206 mph.	250 mph.	273 mph.
Power Plant (2)	2 Wright 1300 1200 HP each	2 Pratt & Whitney 2000 HP each	2 Pratt & Whitney 2100 HP each	3 Wright 1300 2500 HP each	2 Pratt & Whitney 1650 HP each	2 Pratt & Whitney 2100 HP each
Length	64'	73'	71'	73'	78'	72'
Height	17'	20'	20'	23'	31'	25'
Span	90'	90'	91'	100'	113'	97'
Wing Area	395 sq. ft.	708 sq. ft.	513 sq. ft.	575 sq. ft.	1104 sq. ft.	650 sq. ft.
Cooling	22,000'	over 20,000'	over 20,000'	over 20,000'	over 20,000'	over 20,000'

(1) Weight according to space provided for passengers.

(2) Refer to cubic inches of displacement (1400=1400 cubic inches) R=Radial; V=V-twin.

## Lockheed, ALPA Lone Objectors As Industry Asks Stall Rule End

Certification for airline use of war-born transports built with landing speed exceeding present limits largely dependent upon outcome of CAB hearings on proposed CAR Part 64 revision.

By MERLIN MICKEL

Resumption of stalling speed requirements as an unwelcome requirement for transport category aircraft was favored almost unanimously as the Civil Aeronautics Board heard aviation manufacturing and transport engineers comment last week on the proposed new Part 64 of the Civil Air Regulations.

Two voices were raised in opposition. One was that of Lockheed Aircraft Corp., the other the Air Line Pilots Association. The pilot group surprised those who had expected a strong opposing representation from this quarter, by appearing only as an observer

through its Washington attorney, John Dickson. **Steady Objection** — Lockheed's stand for retention of the present 80-mpg stall speed in the landing configuration, was consistent with the company's attitude when present and potential manufacturers of transport planes voted 19 to 1 in favor of elimination, with Lockheed the dissenter.

Company representatives said they would accept an increase to 85-mpg stall speed limit. This concession was made at the hearing for the first time. The Lockheed spokesman said in effect, during presentation of the company's

reasons for objecting to removal of the limit, that if straight-in approach facilities were available at airports, the company would not oppose its elimination.

In the background of the discussion for and against removal of the limit was a post-war situation in which the lethargy of war were a significant factor. These found Lockheed building planes—among them the C-49 Constellation—to meet the CAR stall speed requirement. Engineers say the forthcoming Lockheed Constellation, a larger plane, will come close to it.

**Other Builders**—While Lockheed was building and dumping these ships, other companies such as Boeing and Consolidated-Vultee were working under military contract on large cargo planes where stall speed limits were not a consideration.

Thus, there was laid the basis for an economic contest. If the restriction is eliminated as proposed, planes such as Boeing's C-47 and Consolidated's Model 32 will not be prevented by the restriction from being certified as airworthy for commercial use if they can meet other requirements, and can take full advantage of wartime development.

On the other hand, retention of the limit would not permit such planes, with their higher landing speed, to operate economically in commercial transport, if at all.

The Civil Aeronautics Administration, which after long study recommended the proposed revision, (Aeronautics News, July 2), said that discussion had shown that "more was involved in safety during the landing of an airplane than the number of miles per hour at which contact might be made with the ground during that process."

**First Proposal**—CAA's original proposal for a transport category, made at a meeting with the industry in 1939 under sponsorship of the then Aeronautical Chamber of Commerce, contained no limitation on landing or stalling speed for transport category airplanes.

(Increases in climb requirements with one engine inoperative on a two-engine plane, and two inoperative on a four-engine plane, are proposed by CAA. The manufacturer generally agreed, but opinions differed as to degree. There was also agreement that some regulation should be added for all-engine operation.)

As the end of the week drew near, the board had disposed of



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AiResearch designed the first mechanically assembled all-aluminum, corrosion-resistant intercooler successfully put into production line basis. The tubes are jig assembled and mechanically finished for accurate control of dimensions. This method helps make them mechanically strong enough to withstand terrific back pressure.

Both round and flattened tube intercoolers are standard products of AiResearch. The company's latest development is a flattened-tube unit used on the B-29, which has shown a remarkable increase in effectiveness and as much as a 40% reduction in cooling drag. Weight has been continually decreased. Intercoolers today weigh 30% less than earlier models.

These intercoolers are tested in the AiResearch Laboratories under actual conditions of heat, cold and altitude. Lab performance and actual performance have been remarkably near the same. This experience in designing, testing and manufacturing is available to other aircraft manufacturers and engineers who have an intercooling problem needing solution.



FIRST AIR VIEW, WICHITA:

This first aerial photo of the Wichita, Kan., airport, since before the war, was taken by the AAF. The \$4,000,000 municipally-owned and operated field, greatly enlarged during the war, now covers more than 16,000 acres, with some runways 1,500-ft long. Dual north-south (right to left) runways are paralleled by a taxi strip, as is the northeast-southwest runway. Concrete landing north of the north-south runway is a taxiway connecting with the Constellation-C49 Boeing Airport point is at top left. Administration building and airline flight apron are approximately in the center of the picture.

documentation on stalling speed, climb requirements, and cargo category, and the tail was turning to structural and powerplant requirements.

► **Warner**—Praising over the sessions, which were expected to continue for the full week, was Dr. Edward P. Warner, CAA vice-chairman, who is soon to resign to assume the presidency of the Interim Council of the Professional International Civil Air Organization.

Other Board members present were L. Wulfe Schaefer, chairman, Harter Beach, and Oswald Ryan.

Groups participating in the discussion included the Aircraft Industries Association, Air Transport Association, CAA and ALPA.

## Two New Examiners

### Added To CAB Staff

Recent additions to Civil Aeronautics Board's staff of trial examiners—bringing the total to 17—were J. Earl Cox and Frank Trelease.

► **Cox** went to the board from the Federal Trade Commission, where he had served as a trial examiner since 1962, presiding at the much publicized Willys Overland Jeep case among others. A graduate of Ohio Wesleyan University and the University of Chicago Law School, he practiced law in Akron, Ohio, for 26 years and, from 1958-61, served as judge of Akron's Municipal Court.

► **Trelase**, a graduate of the University of Colorado School of Law,

was assistant secretary of All American Aviation for two and a half years prior to joining CAA. He practiced law in Denver and taught at the University of Wisconsin.

## CAA Radar Buying Anticipated By Firm

Officers of Gillilan Bros., Inc., of Los Angeles, look to CAA as a logical purchaser for the radar Ground Control Approach systems which they are developing for use on commercial airports.

Their system (AVIATION NEWS, Sept. 14) can be operated with three control tower operators, who have had only three weeks training. It was stated Company engineers expect cost of their equipment will be considerably under \$200,000 per installation, and possibly in the neighborhood of \$160,000. It is understood Army installations of GCA cost approximately \$370,000.

► **Army Use**—One hundred of the mobile GCA installations were manufactured for and used by the Army following perfection of circuits by the radiation laboratory of Massachusetts Institute of Technology. Ten miles in and to be the device's successful range for initial contact with a plane seeking landing direction.

A strong argument for airline interest in the device is the fact that no extra equipment or added weight is required in the plane,

since the whole operation is handled on the ground, with the plane crew receiving instructions over the radio.

Gillilan is awaiting results of CAA tests with its military mobile installation, and expects the device may be used in the near future at 33 major domestic airports, where traffic density is sufficient to make the 36 seconds landing interval, claimed for the radar landing system, an attraction.

## Airlines Absorbing 280 Vets Weekly

Report by ATA estimates 3,000 ex-military payoffs by year each one-fourth former employees.

The Air Transport Association estimates that with about 285 veterans being hired or rehired by the airlines each week, more than 2,000 each personnel will be on the current payrolls by the end of this month. More than a fourth of these will be former airline employees.

The transcontinental project, in which the four coast-to-coast operators and Pan American Airways are carrying troops across country under Army contract at the rate of \$3,946 a month, has accounted for about 1,600 jobs, of which the majority are being filled by veterans. This includes 750 additional captains and co-pilots and 250 flight mechanics.

► **Special Training**—The returned veterans are receiving special courses from many of the airlines in flying, operations, maintenance, communications, familiarization with new company policies, and other supplements to whatever aviation training they received in service. Rehabilitation courses for the physically handicapped are included. Eastern Air Lines has indicated it will be able to employ up to 1,000 veterans with accommodations in such jobs as reservation clerks, ticket sellers, mechanics, weather and instrument experts and bookkeepers.

Of 27 pilots recently hired by Northwest Airlines, 22 were veterans. Pennsylvania-Central Airlines has 45 AAF pilots on its regular flights. Braniff Airways started September with more than 20 percent of its male personnel listed as veterans of World War II.

In a summary of the personnel situation, ATA said recently that the airlines probably could hire ex-pilots from among returning

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# KELLETT



**Radar Trailer for Airports:** Photo shows interior of the Gillilan radar landing control trailer, part of a mobile unit for use with, or supplementary to, present airport control equipment.





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veterans to the limit of their training facilities, but the captain situation was more acute, despite release by the Air Transport Command of so many former airline pilots as possible for the transcontinental project. Before Japan surrendered, difficulty was encountered in obtaining release of former airline pilots in the Navy, but ATA has renewed its request for these men with the hope that the situation may have eased.

► **Mechanics Needed**—Veterans' applications for jobs as mechanics are increasing, the association reports, but some of the airlines still need more of this type of personnel.

## Colonial Favored In Canadian Case

Examiners revealed by CAB soon granting last new line direct through Washington-Montreal-Ottawa service.

Highlight of last week's decision by the Civil Aeronautics Board is the long-pending Canadian case in the selection of Colonial Airlines to provide new through service between Washington, D. C., and Montreal and Ottawa, Canada.

CAB also authorized extension of Colonial's FAM I route Burlington, Vt., to Ottawa via Montreal, N. Y., to give direct service between New York and Ottawa. ► **Bilateral Agreement**—By taking this action, the Board assented operations over three of six additional routes allotted the U. S. in a bilateral agreement, Feb. 17, with Canada and, at the same time, reversed recommendations of Examiners William J. Madden and H. Kenneth Spang against the Washington - Ottawa - Montreal routes (AVIATION NEWS, Feb. 26). The Board felt that the airlines should have considered the desirability of direct air service be-

tween the capitals of the two countries, especially since this does not now exist and "aid facilities are slow and dubious." Also cited was "an unusual lack of transportation facilities for reasonably direct service in a North-South direction through the area generally."

In selecting Colonial's proposal for Washington-Ottawa-Montreal service over those of American Airlines and Eastern Air Lines, CAB pointed to Colonial's entire dependency on its New York-Montreal route and the diversion of traffic and revenue which might result if either of the other carriers were chosen. Colonial, the Board said, will have opportunity "to speed part of its existing costs over the new route operation and thereby reduce its present per-mile costs."

In the proceeding, the Board: ► Granted PCA authority to serve Elmira-Corning and Rochester, N. Y., on AM 34, to meet the former's need for connections with cities to the South and to provide improved, direct air service between Rochester and Washington. ► Granted American authority to serve Elmira-Corning and Binghamton, N. Y., on AM 7, to meet the former's need for New York, Buffalo, Syracuse, and Rochester service and the latter's need for direct New York and Buffalo-Rochester service.

► Deferred American's application for extension of ANT from Williamsport to Philadelphia pending selection of Middle Atlantic Case. ► Dismissed applications of Hytek Flying Service and Union Airways. ► Denied all other applications.

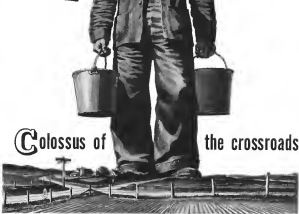
## 230 Army C-54's Seen Surplus Soon

Price set for SPD for "B" version quoted as \$300,000 with 50 percent reduction for conversion.

Domestic and foreign airlines expect to have approximately 230 surplus C-54's, four-engine Army version of the commercial Douglas DC-4, from which to make an-

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Start to finish with solid and light aluminum, steel or stainless steel and aluminum alloy structural design. Steel structures, aircraft and structural design. The York Co., N. Y.  
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FARMERS want plans, good plans, and have the money to buy plans. The farmer is not business man who can look to an unmet need for prosperity for some years. For he has been given size of the wheat plot a permanent area made. In fact, he has been guaranteed 90% of the production of his land.

To the farmer, price gives more power and profitable price for his products. To America, price gives the only more greater national prosperity. For, national income follows farm income.

Yes, farmers face good prices—and

**What business can ignore the farmer's strength?**

they face an uncertainty. Their business need not be hidden, even for a day, in which farm war to peace production. And the world demand for their products grows with each month. Heavy war the wheat over back to American agriculture.

World events have made the farmer count more than \$1 billion—and industry's \$1.2 billion. Farm income has soared to nearly \$1 billion, and farmers' savings, as steadily increasing, have now reached \$1 billion.

And you can bank on this wealth of the farmer's new wealth will go into aircraft in the immediate future.

A recent survey in Kansas, just as an example, reveals that 45% of every 50,000 farm families voted to buy plans, an average only 15% of every 10,000 city families! Can any aircraft company afford to overlook the farmer—or his preferred neighbor?

**Country Gentleman**  
No. 1 in FARMING—BUREAU OF AERONAUTICS





## Keeping Non-Scheduled Aviation Alive

DURING THE LAST 24 HOURS before the deadline last Tuesday, telegrams and letters reached the Civil Aeronautics Board urging a hearing and protesting either all or parts of the proposals made by examination for economic regulation of non-scheduled aviation. Considering the long-range impact of the question, and the thousands of fixed base operators there are in the country, the response from individuals was meager. But the last minute awakening of aviation's leading associations was encouraging. Fourteen filed comments. Only the Air Transport Association approved the economic report in toto.

This response assures an oral argument! The next step is a strong, clear, convincing presentation for the CAB incorporating the latest developments prepared by a united non-scheduled aviation industry. All affected groups could well consider a joint plan-

ning session to prepare a program which will be spared petty sniping from within this young, rapidly growing industry.

Combined, coordinated efforts in proportion to the importance of the subject are in order from ATIS, UPMA, NATA, Administrator Wright's non-scheduled Aviation Advisory Committee, Personal Aircraft Council, Freeder Airlines Association, AOPA, the Civil Aviation Legislative Council, American Association of Airport Executives, ADMA, Aviation Insurance Group, NAA, NAAAO, individual operators who fail to write the Board their comments, meanwhile, are shirking their responsibility.

If non-scheduled aviation fails to make the strongest possible case for itself in this proceeding it can place the blame only on its own plain ignorance of a few vital facts of life and how to keep it.

## Nebraska Shows Us How

WHILE COMMUNITIES IN OTHER MERE POWERS STATES sit back complacently awaiting local federal funds and only the most elaborate, costly airports or more at all, let's consider Nebraska. Realizing that the utility of the airplane depends entirely on the number of airfields, Nebraska has made remarkable progress recently in establishing landing areas. Most of the state's fields have no runways. Many plans call for this type on present improvements. Costlier equipment can come later when business justifies it. Meanwhile, a score or more communities will have got up adequate bases for training, business and pleasure.

From a pre-war high of 55 registered airports in 1941, Nebraska's total dropped to 12 two years ago. As security restrictions gradually relaxed the total reached 44 at the start of this year. Today it is 44. The Nebraska State Department of Aeronautics believes the number will double in the next year. Eighteen of the bases now registered are private.

The program for a score of other Nebraska cities is noteworthy for the population of the communities as much as for their progress. For example, how many towns of comparable size can boast projects such as these:

Falls City, with about 6,000 population, has voted a \$20,000 bond issue almost 10 to 1 for a new airport. Nebraska's commission will provide aid not to exceed \$15,000. Lexington, with 4,000 citizens, voted 3 to 1 to invest \$20,000 in a port, and is purchasing 150 acres. McCook, 6,000 population, has purchased land and is building an airport on 125 acres of the property Broken Bow, 3,000 strong, voted \$10,000 for development of a 100-acre field. Holdrege, 3,000, is receiving state help to develop a field on 310 acres purchased Oshkosh, with 2,000 citizens, is acquiring 150 acres after citizens passed a \$14,500 bond issue by a 3 to 1 vote.

The Aeronautics Department has conducted a survey for Hastings, population 2,000, and a local group is working on a plan to acquire land for a

field. Under an action passed by the last session of the legislature, Atkinson, with 1,000 souls, and its neighbor of Stuart, 100, are establishing a jointly-owned airport on 200 acres.

Cambridge, with 1,000 population, plans to spend \$20,000 on a field. Red Cloud, with 3,000 persons, passed a \$9,500 airport bond issue by 4 to 1 vote. Gordon, with 2,000 population, has completed grading, leveling and seeding a field of about 194 acres, with state aid. Crete, with 3,000 inhabitants, is moving its field to a new location and has been allotted up to \$10,000 in state funds.

Norfolk, 10,000, has been allotted \$25,000 in state funds for an administration building. Beatrice and Fremont, each with about 11,000 persons, are receiving funds through CAA for completion of fields. Other communities are enlarging, expanding and improving their airports, according to Lawrence Yeagrum, aviation editor of the Omaha World-Herald.

Nebraska's record puts most other states in sorry contrast. Nebraska's personal aviation may well lack the features of fancier airports of other states, perhaps, but the very existence of a larger number of adequate landing fields will put the state far ahead almost everywhere, and being aviation closer to the people, than in most other states we can name at the moment.

## Dr. Warner Moves Up

DR. EDWARD P. WARNER plans to leave Washington this week for Montreal, where he will assume the presidency of the Provincial International Civil Aviation Organization. His election to this position of honor yet bestowed in a distinguished career. It is ample evidence of the profound respect of the aeronautical world for his abilities. His services to aviation and to the Civil Aeronautics Board while he served its members and many recently as its vice-chairman have been prodigious. As he begins this new chapter, in which he can contribute even more effectively toward a better world, he carries with him the best wishes of his countrymen.

ROBERT H. WOOD

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us  
for  
Strutting*



*but—* we did help

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World Records for  
Production!

We are happy to have contributed to Grumman's outstanding production records, but we take perhaps even a greater pride in the fact that the inherent quality and design of Bendix' Pneudraulic Shock Struts contribute so importantly to the high performance standards of Grumman and other leading plane manufacturers.

next page

## Bendix Pneudraulic Shock Struts

Designs in being now: greatly advanced to meet ever increasing demands resulting from latest plane shapes and higher speeds.



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BETHPAGE, LONG ISLAND, NEW YORK



April 25, 1945

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South Bend 20, Indiana

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To know these accomplishments would have been impossible without your aid.

Very truly yours,

GRUMMAN AIRCRAFT  
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*for J. R. Castley*

L. A. SWITZ  
Executive Vice-President

LAS:cm

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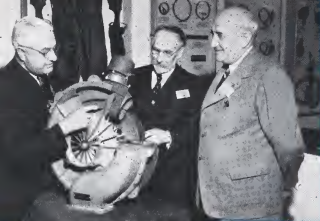
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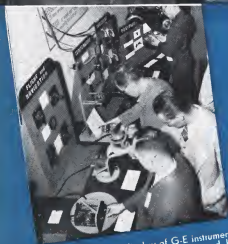


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Dr. Mass, A. L. Berger, and W. A. Reeves examine a G-E turbosupercharger—fore-runner of the powerful gas turbine for aircraft.



E. S. Thompson and R. G. Standerwick, G-E engineers associated with development of G-E gas turbines, the precision products visitors.



Popular exhibit was display of G-E instruments specially developed for aircraft powered by gas turbines.



G-E engineers discuss fuel-system equipment.

# MILESTONE at SWAMPSCOTT

LEADING JET TECHNICIANS HOLD HISTORIC MEETING TO DISCUSS PROGRESS

Jointly sponsored by the Army Air Forces Air Technical Service Command and General Electric, a three-day closed session of American and English engineers at Swampscott, Mass., revealed common problems and new developments in the science of jet propulsion. Technicians of leading aircraft and aircraft-engine manufacturers discussed performance characteristics of G-E aircraft gas turbines for jet propulsion and propeller drive, combustion development, metallurgical advancements, air-compressor design, jet-plane design, and the intricate sequence of tests that gas turbines must undergo from factory to flight.

In what was probably the first such meeting ever held, it was generally felt that the aircraft gas turbine will take a leading part in the advance of commercial as well as military aviation—and General Electric is proud to be associated with this work. The Company's vast resources in trained personnel and equipment have ably fitted it to play an increasingly important role in both the development and manufacture of aircraft gas turbines for jet propulsion and for propeller drive. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*



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